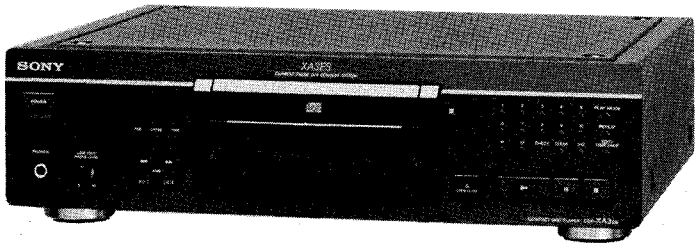
CDP-XA3ES

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
Australian Model



Model Name Using Similar Mechanism	CDP-333ESJ
CD Mechanism Type	CDM19E2-5BD10B
Base Unit Type	BU-5BD10B
Optical Pick-up Type	KSS-240A

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz ± 0.3 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0018%

CDP-XA3ES

	Jack type	Maximum output level	Load impedance
LINE OUT (FIXED)	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
LINE OUT (VARIABLE)	Phono jacks	2 V (at 50 kilohms)	Over 50 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm
PHONES	Stereo phone jack	28 mW	32 ohms

General

Power requirements

Where purchased	Power requirements
Europe	220 V – 230 V AC, 50/60 Hz
U.S.A., Canada	120 V AC, 60 Hz
Australia	240 V AC, 50 Hz
Other countries	110 V – 120 V or 220 V – 240 V AC, adjustable, 50/60 Hz

Power consumption	CDP-XA3ES: 17 W (for Europe and Australia) 19 W (for U.S.A. and Canada)
Dimensions (approx.) (w/h/d)	CDP-XA3ES: 430 × 125 × 345 mm (17 × 5 × 13 5/8 in.) incl. projecting parts
Mass (approx.)	CDP-XA3ES: 6.6 kg (14 lbs 9 oz)

Supplied accessories

Audio cord (2 phono plugs – 2 phono plugs) (1)
Remote commander (remote) (1)
Sony SUM-3 (NS) batteries (2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

SONY

MICROFILM

3.98

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

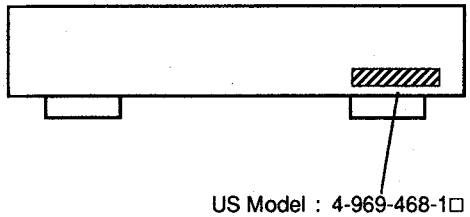
The following caution label is located inside the unit.

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE
VARNING	;	LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

MODEL IDENTIFICATION

— BACK PANEL —



US Model : 4-969-468-1□
AEP Model : 4-969-468-2□
E Model : 4-969-468-3□
Australian Model : 4-969-468-4□
Canadian Model : 4-969-468-5□
German Model : 4-969-468-6□

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SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

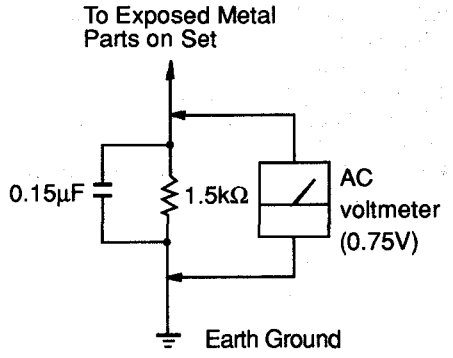


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repain parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

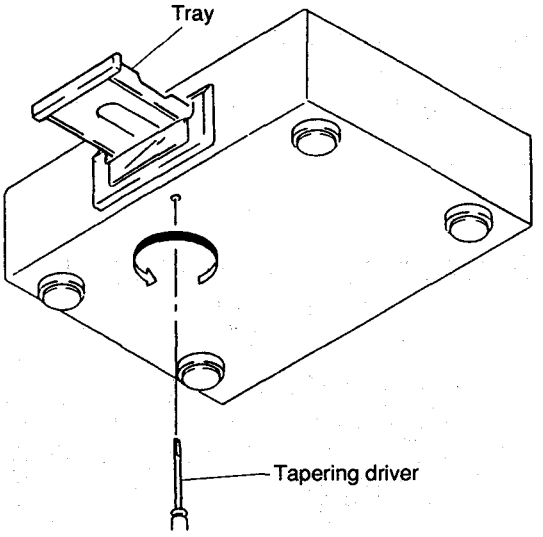
LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output three times.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow.

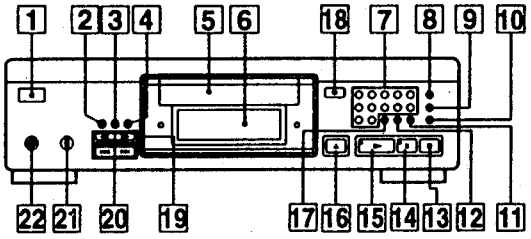
* To close the disc tray, turn the driver in the reverse direction.



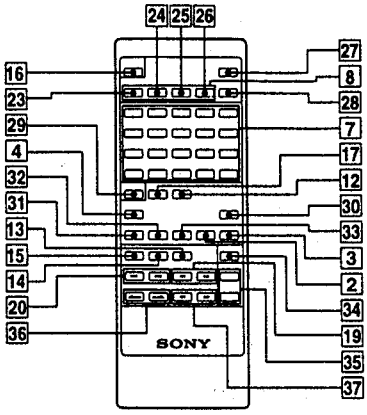
SECTION 2
GENERAL

Identifying the Parts

Front Panel



Remote Commander (RM-D921)

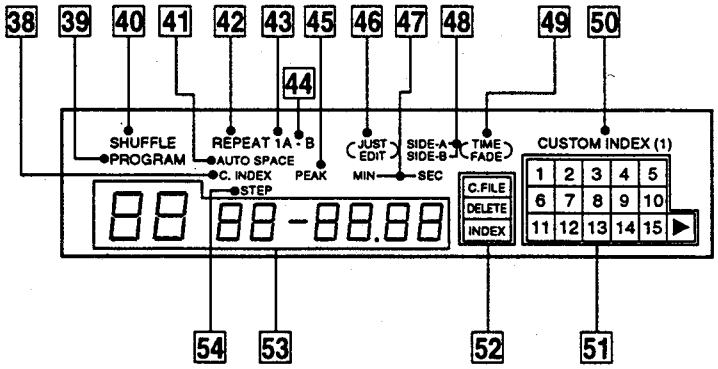


1 Power switch
2 FILE button
3 ERASE button
4 TIME button
5 Disc tray
6 Display window
7 Numeric buttons
8 PLAY MODE button
9 REPEAT button
10 EDIT/TIME FADE button
11 >12 (over 12) button
12 CLEAR button
13 ■ (stop) button
14 II (pause) button
15 ► (play) button
16 ≙ OPEN/CLOSE button
17 CHECK button
18 Remote sensor
19 ◄◄/►► (manual search) buttons
20 I◄◄/►►I AMS* buttons

21 LINE OUT/PHONE LEVEL control
22 PHONES jack
23 CONTINUE button
24 SHUFFLE button
25 PROGRAM button
26 C. INDEX button
27 DISPLAY MODE button
28 MUSIC SCAN button
29 >20 (over 20) button
30 PEAK SEARCH button
31 REPEAT (repeat/A-B repeat clear) button
32 A ↔ B repeat button
33 AUTO SPACE button
34 FADER (fade in/fade out) button
35 LINE OUT LEVEL (line out/headphones level) buttons
36 ← → INDEX buttons
37 ◄◄ ►► SLOW (low speed manual search) buttons

* AMS is the abbreviation of Automatic Music Sensor.

Display Window

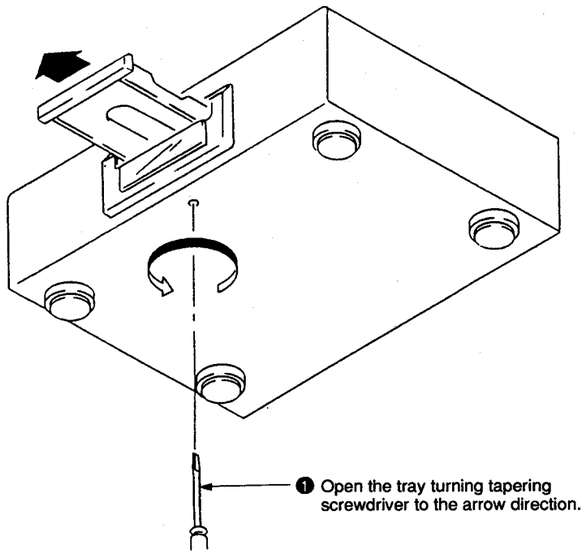


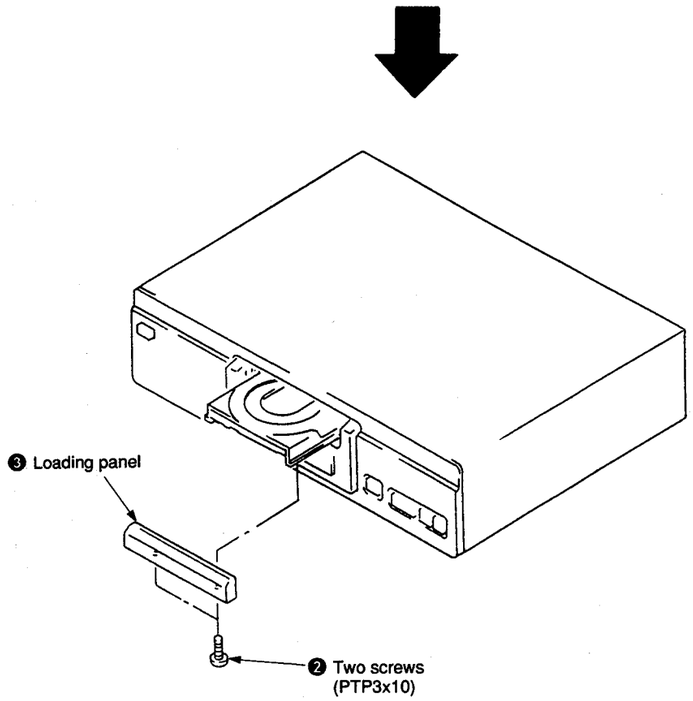
38 C. INDEX
39 PROGRAM
40 SHUFFLE
41 AUTO SPACE
42 REPEAT
43 REPEAT 1
44 REPEAT A-B
45 PEAK
46 JUST EDIT
47 MIN/SEC
48 SIDE A/SIDE B
49 TIME FADE
50 CUSTOM INDEX (1)
51 1 — 15 ►
52 C FILE/DELETE/INDEX
53 DISPLAY
54 STEP

SECTION 3
DISASSEMBLY

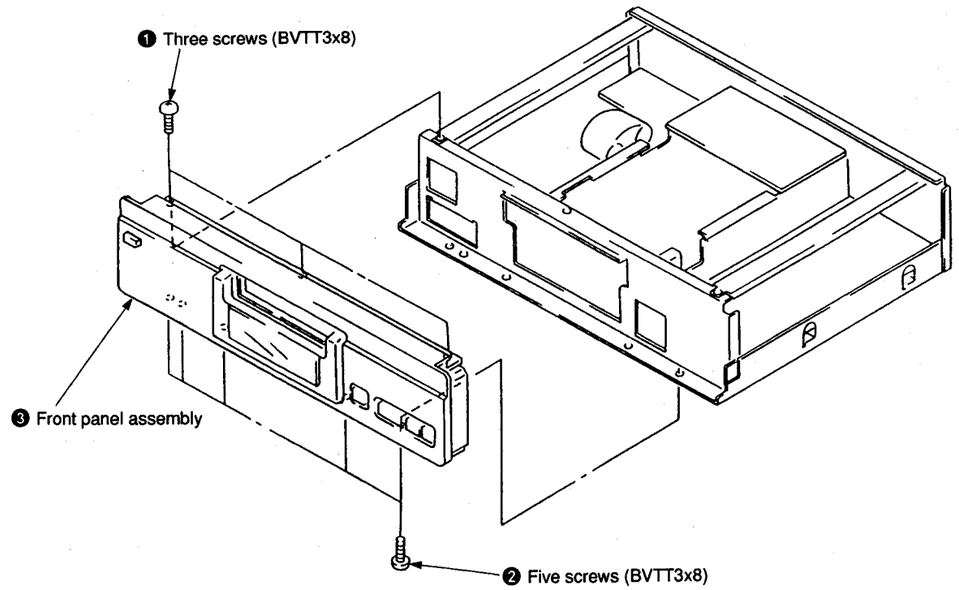
Note : Follow the disassembly procedure in the numerical order given.

3-1. LOADING PANEL

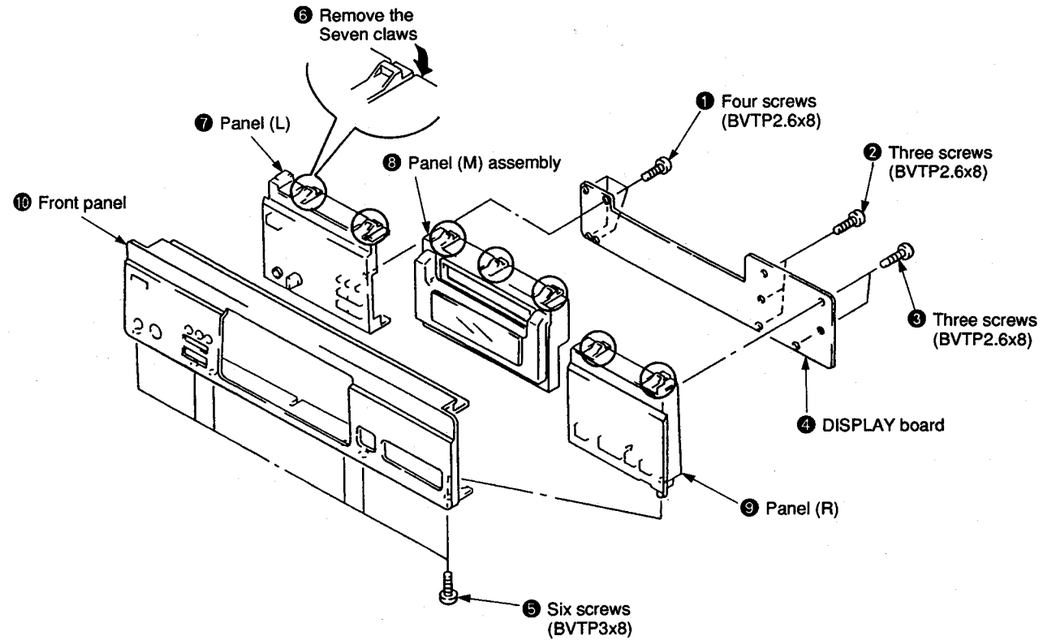




3-2. FRONT PANEL ASSEMBLY



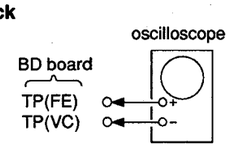
3-3. PANEL (L), (M), (R)



SECTION 4
ELECTRICAL ADJUSTMENTS

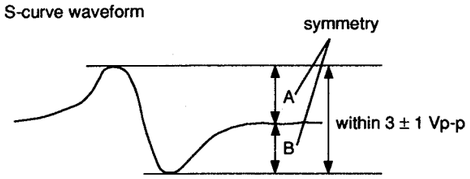
Note :
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :
1. Connect oscilloscope to test point TP (FE).
2. Connect between test point TP (FEI : IC101 ㉙ pin) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

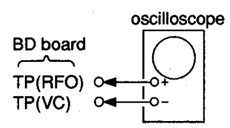
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

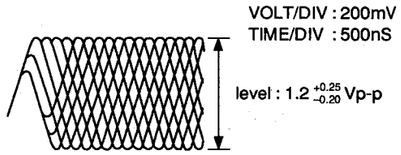


Procedure :
1. Connect oscilloscope to test point TP (RFO).
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

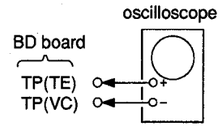
Note :

Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform

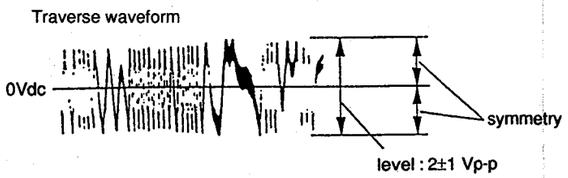


E-F Balance (Traverse) Check



Procedure :
1. Connect test point TP (ADJ) on MAIN board to ground and TP (TEI : IC101 ㉗ pin) on BD board to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V dc, and check this level.

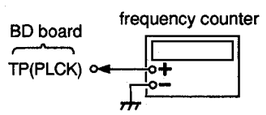
Traverse waveform



6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

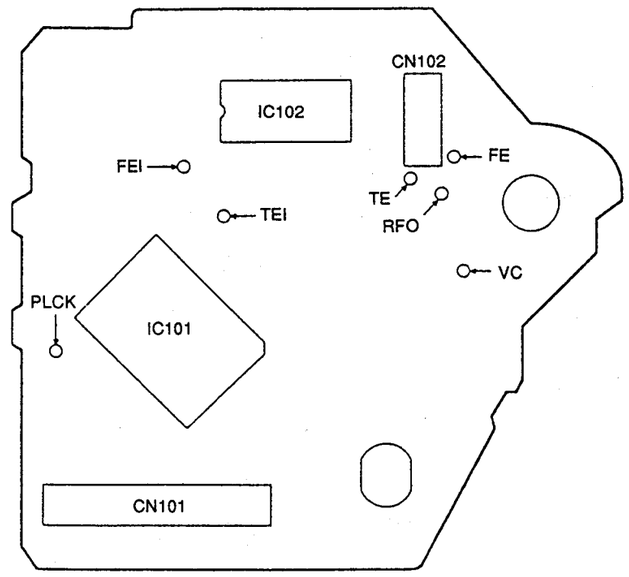
Procedure :
1. Connect frequency counter to test point (PLCK) with lead wire.



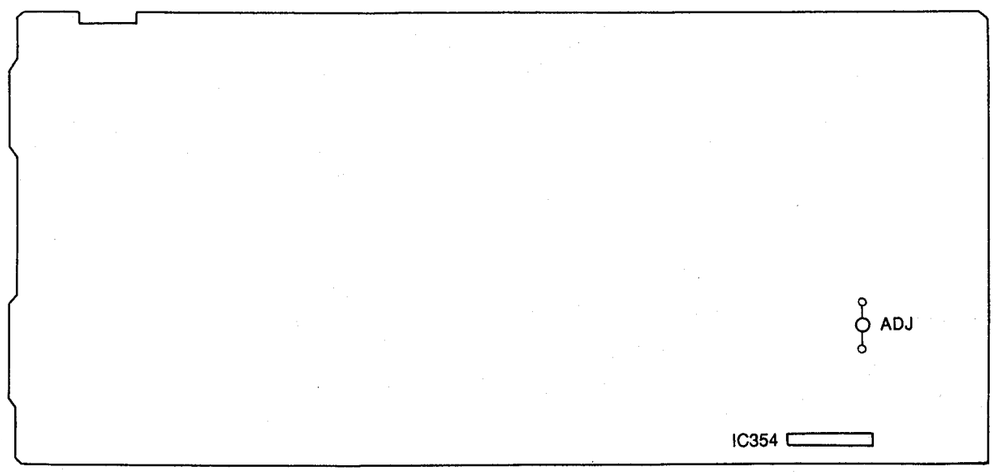
2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

[BD BOARD] — Conductor Side —

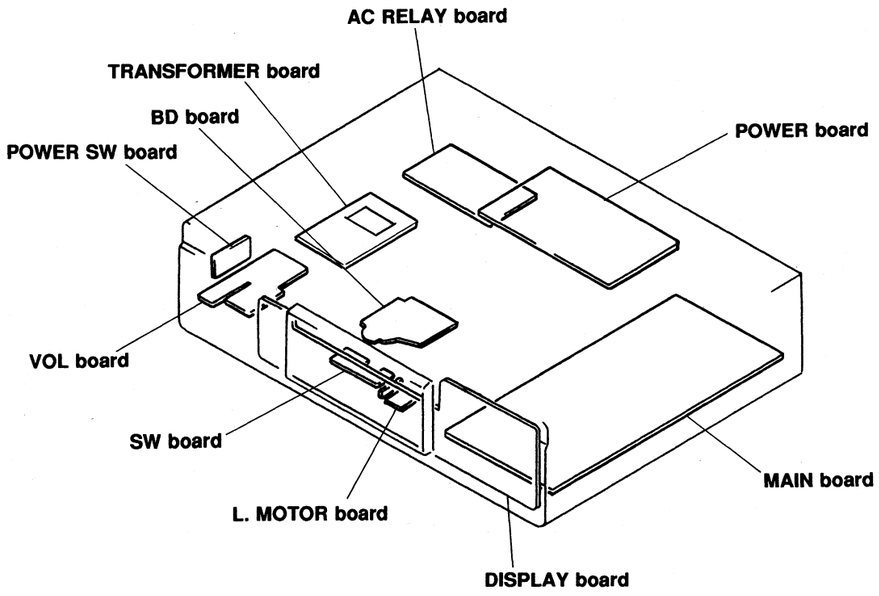


[MAIN BOARD] — Component Side —

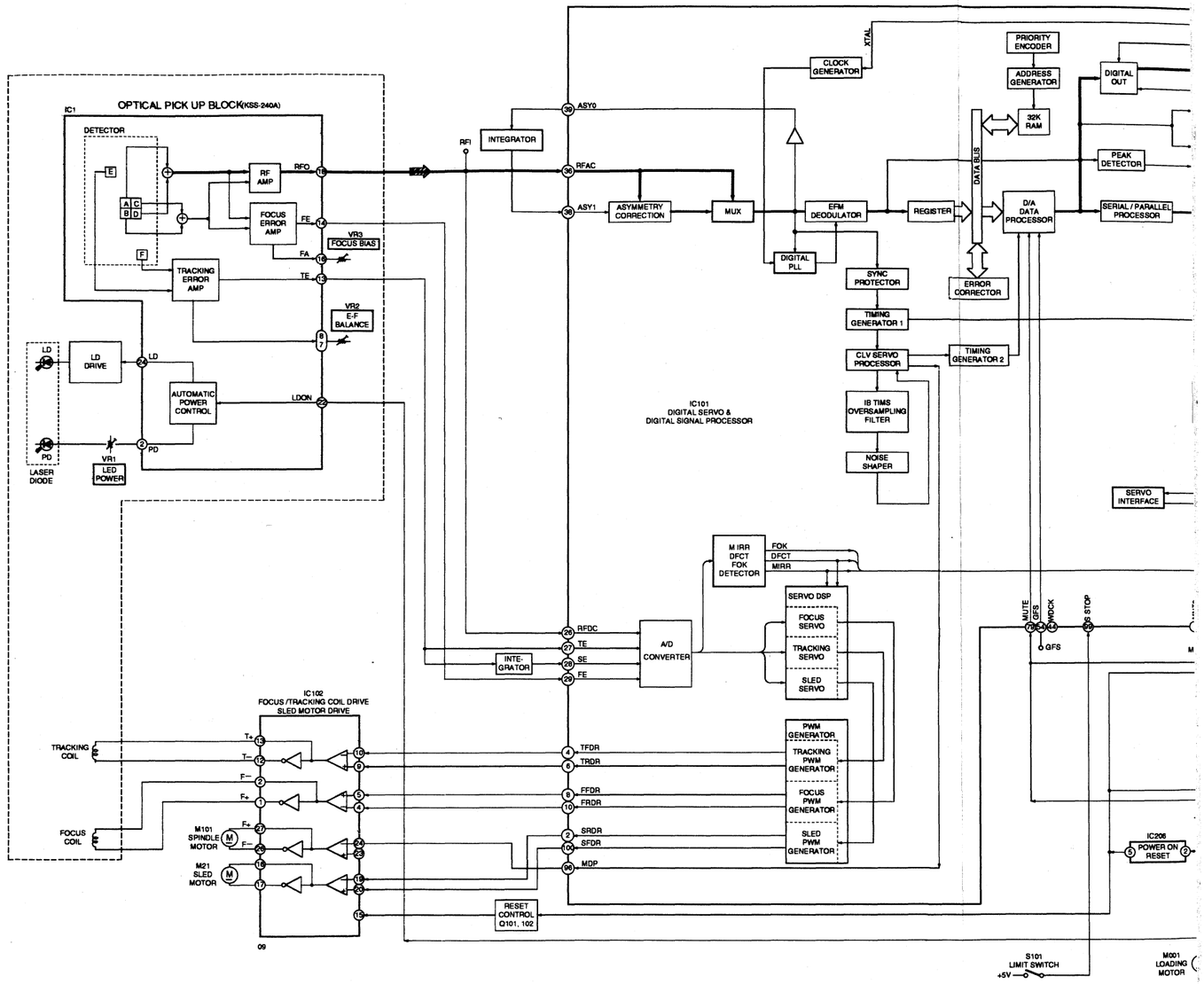


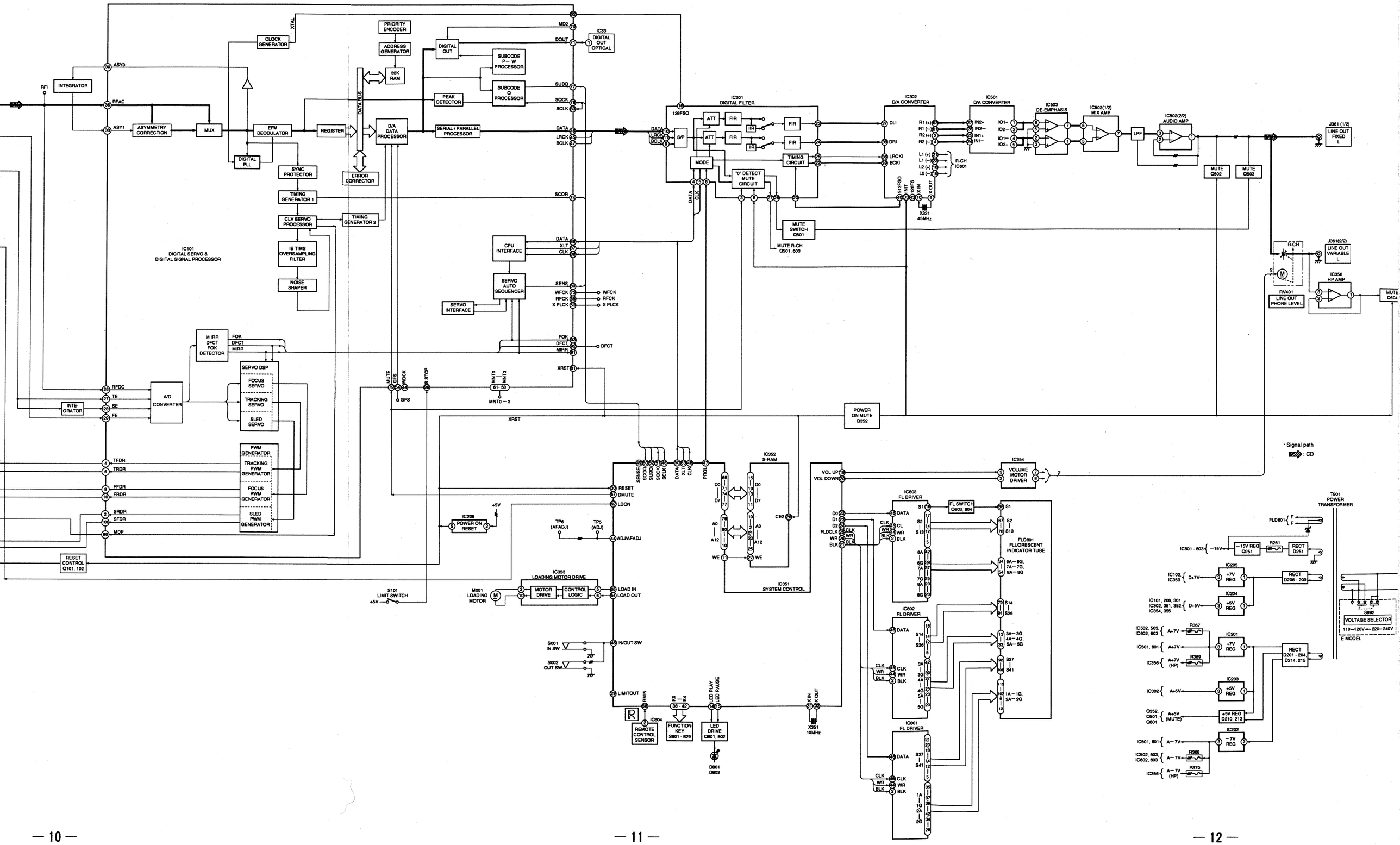
SECTION 5
DIAGRAMS

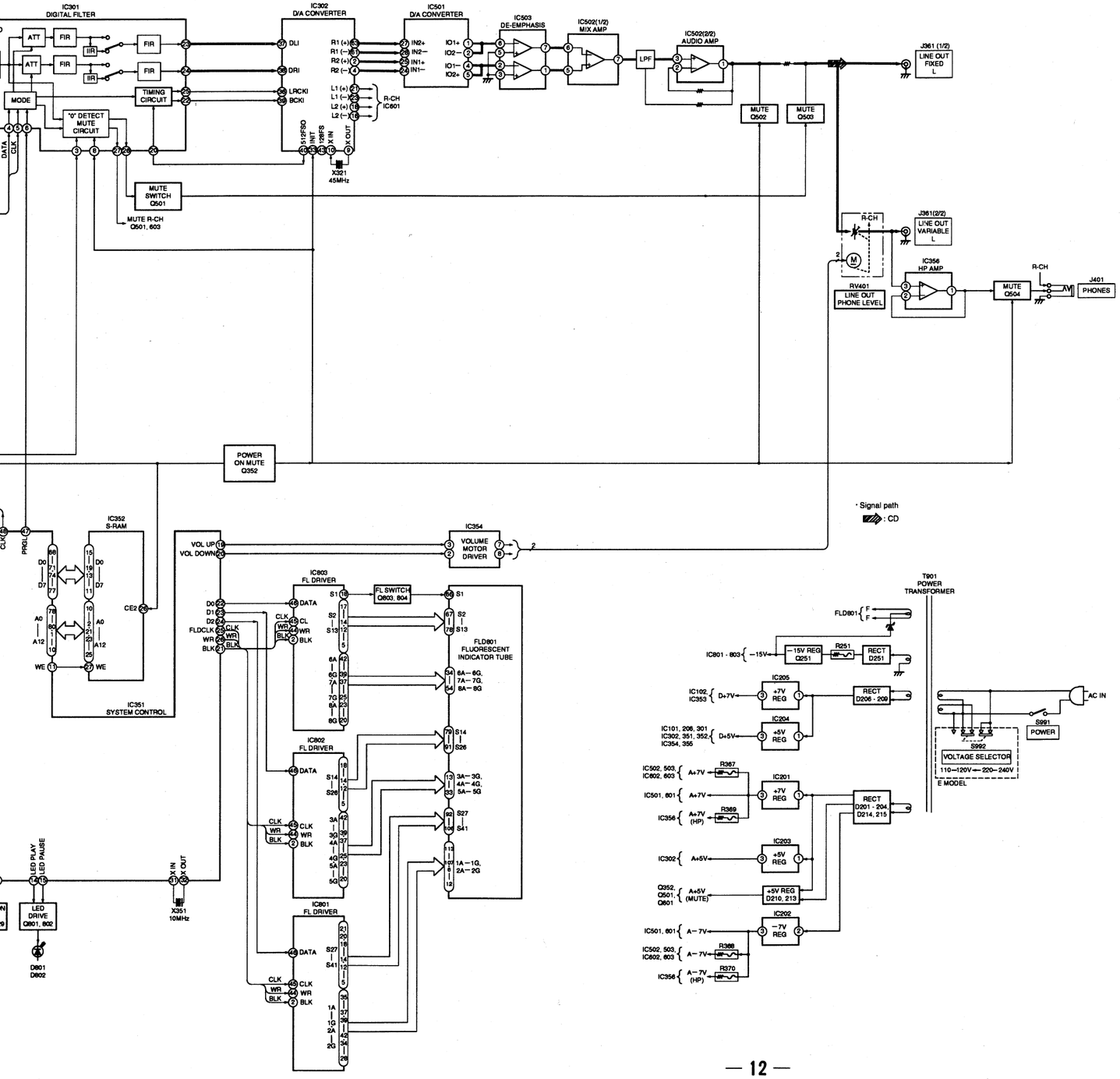
5-1. CIRCUIT BOARDS LOCATION



5-2. BLOCK DIAGRAM

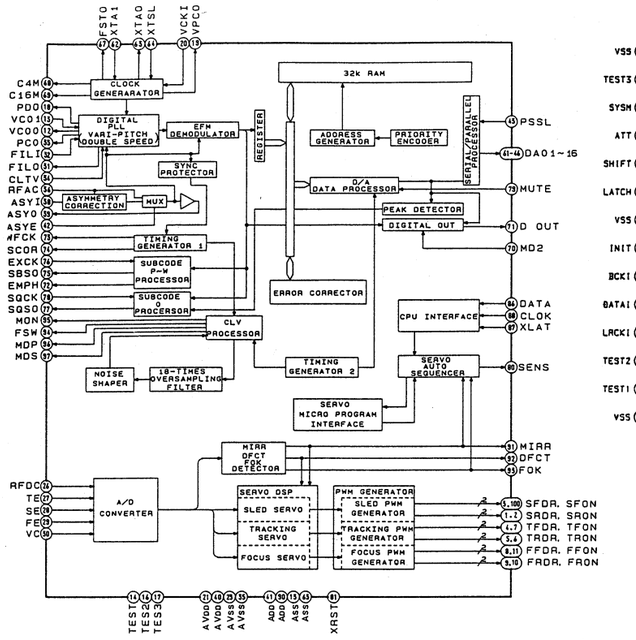



INTEGRATOR
RFI
ASY0
RFAC
ASY1
ASYMMETRY CORRECTION
MUX
EFM DECODULATOR
REGISTER
DATA BUS
CLOCK GENERATOR
XTAL
PRIORITY ENCODER
ADDRESS GENERATOR
32K RAM
DIGITAL OUT
SUBCODE P– W PROCESSOR
SUBCODE Q PROCESSOR
PEAK DETECTOR
D/A DATA PROCESSOR
SERIAL / PARALLEL PROCESSOR
DIGITAL PLL
SYNC PROTECTOR
ERROR CORRECTOR
TIMING GENERATOR 1
TIMING GENERATOR 2
CLV SERVO PROCESSOR
IB TIMS OVERSAMPLING FILTER
NOISE SHAPER
IC101
DIGITAL SERVO &
DIGITAL SIGNAL PROCESSOR
CPU INTERFACE
SERVO AUTO SEQUENCER
SERVO INTERFACE
IC33
DIGITAL OUT OPTICAL
MD2
DOUT
SUBQ
SCOR
SCLK
DATA
LRCK
BCLK
XLT
CLK
SENS
WFCK
RFCK
X PLCK
XRST
MUTE
DFCT
MIRR
FOK
DFCT
MIRR DFCT FOK DETECTOR
A/D CONVERTER
INTE-GRATOR
RFDC
TE
SE
FE
SERVO DSP
FOCUS SERVO
TRACKING SERVO
SLED SERVO
PWM GENERATOR
TRACKING PWM GENERATOR
FOCUS PWM GENERATOR
SLED PWM GENERATOR
TFDR
TRDR
FFDR
FRDR
SRDR
SFDR
MDP
RESET CONTROL Q101, 102
IC206
POWER ON RESET
+5V
TP6 (AFADJ)
TP5 (ADJ)
ADJ/AFADJ
RESET
DMUTE
LDON
IC353
LOADING MOTOR DRIVE
MOTOR DRIVE
CONTROL LOGIC
LOAD IN
LOAD OUT
M001 LOADING MOTOR
S101 LIMIT SWITCH
S001 IN SW
S002 OUT SW
IN/OUT SW
LIMITOUT
IC804
REMOTE CONTROL SENSOR
FUNCTION KEY S801 - 829
LED DRIVE Q801, 802
D801 D802
LED PLAY
LED PAUSE
IC352
S-RAM
IC351
SYSTEM CONTROL
IC301
DIGITAL FILTER
128FSO
ATT
FIR
IIR
MODE
"0" DETECT MUTE CIRCUIT
TIMING CIRCUIT
MUTE SWITCH Q501
MUTE R-CH Q501, 603
IC302
D/A CONVERTER
DLI
DRI
LRCKI
BCKI
512FSO
X OUT
X IN
X321 45MHz
IC501
D/A CONVERTER
R-CH IC601
IC503
DE-EMPHASIS
IC502(1/2)
MIX AMP
LPF
IC502(2/2)
AUDIO AMP
MUTE Q502
MUTE Q503
J361 (1/2)
LINE OUT FIXED L
J361(2/2)
LINE OUT VARIABLE L
R-CH
RV401
LINE OUT PHONE LEVEL
IC356
HP AMP
MUTE Q504
POWER ON MUTE Q352
XRST
VOL UP
VOL DOWN
IC354
VOLUME MOTOR DRIVER
IC803
FL DRIVER
IC802
FL DRIVER
IC801
FL DRIVER
FL SWITCH Q803, 804
FLD801 FLUORESCENT INDICATOR TUBE
· Signal path
: CD
T901 POWER TRANSFORMER
FLD801
IC801 - 803
–15V REG Q251
R251
RECT D251
IC205
+7V REG
RECT D206 - 209
IC102, IC353
IC204
+5V REG
IC101, 206, 301, IC302, 351, 352, IC354, 355
R367
IC201
+7V REG
RECT D201 - 204, D214, 215
R369
IC203
+5V REG
+5V REG D210, 213
IC202
–7V REG
R368
R370
S992
VOLTAGE SELECTOR
110–120V–220–240V
E MODEL

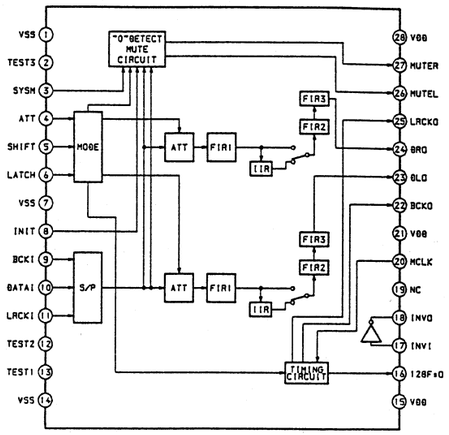


5-3. IC BLOCK DIAGRAMS — MAIN SECTION —

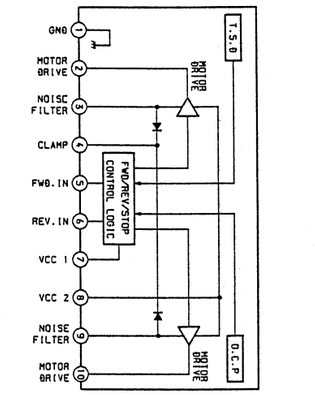
IC101 CXD2515Q



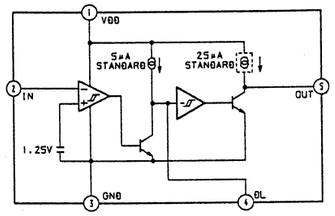
IC301 CXD8504M



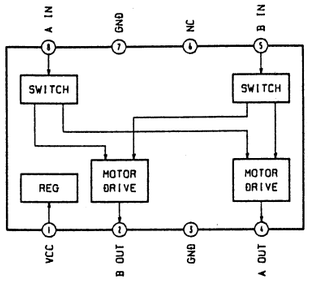
IC353 LB1641



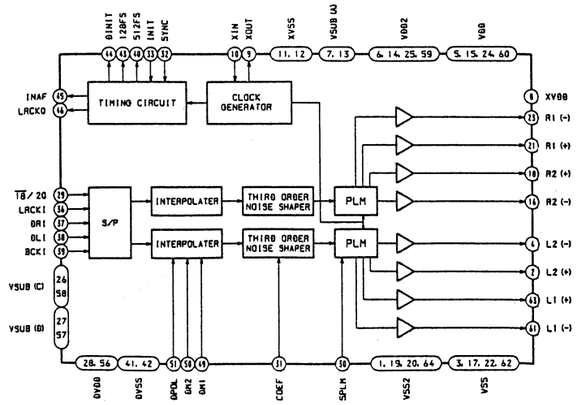
IC206 M51957AL



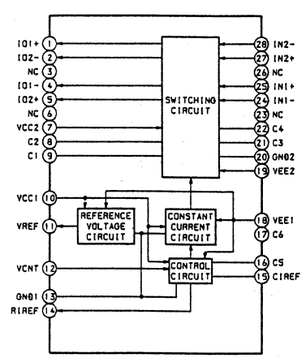
IC354 BA6208



IC302 CXD2562Q



IC501, 601 CXA8042S



5-4. PRINTED WIRING BOARD — MAIN SECTION —

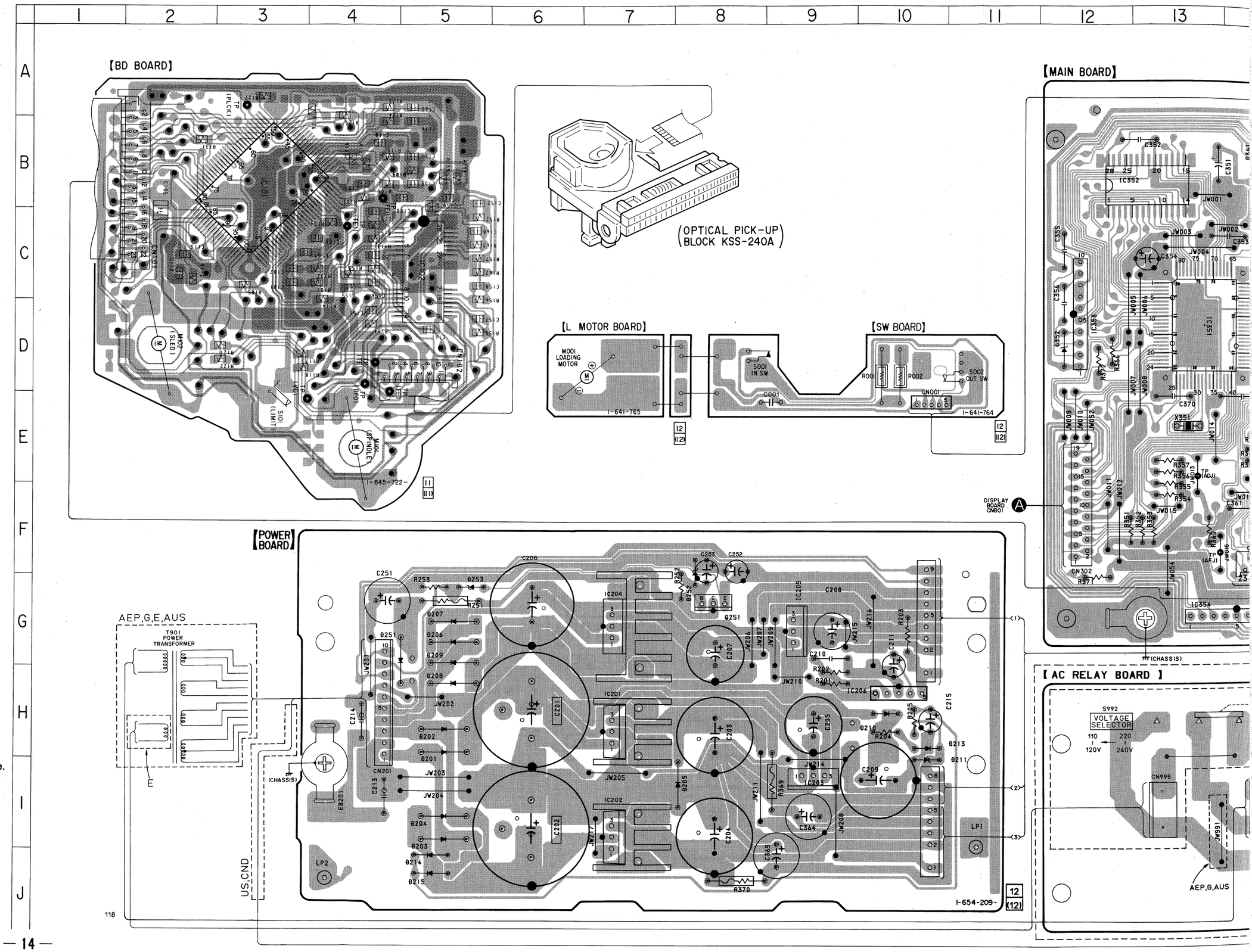
• See page 9 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D201	H-5
D202	H-5
D203	I-5
D204	I-5
D205	I-8
D206	G-5
D207	G-5
D208	H-5
D209	G-5
D210	H-10
D211	I-10
D213	H-10
D214	J-5
D215	J-5
D251	G-5
D252	G-8
D253	G-5
D301	B-17
D351	B-14
D352	D-12
D353	B-22
IC101	B-3
IC102	C-5
IC201	H-7
IC202	I-7
IC203	I-9
IC204	G-7
IC205	G-9
IC206	H-10
IC301	C-16
IC302	D-17
IC351	D-13
IC352	B-13
IC353	D-12
IC354	G-14
IC355	C-24
IC356	G-23
IC501	C-18
IC502	D-22
IC503	B-22
IC601	F-18
IC602	E-22
IC603	F-22
Q251	G-8
Q352	B-23
Q501	B-23
Q502	C-23
Q503	C-23
Q504	F-23
Q601	B-23
Q602	E-23
Q603	E-23
Q604	G-23

Note:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- Abbreviation
  CND : Canadian model.
  G : German model.
  AUS : Australian model.



9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

【MAIN BOARD】

【SW BOARD】

【AC RELAY BOARD 】

【POWER SW BOARD】

【VOL BOARD】

DISPLAY BOARD CN801

(CHASSIS)

AEP,G,E,AUS

US,CND

I-654-209-

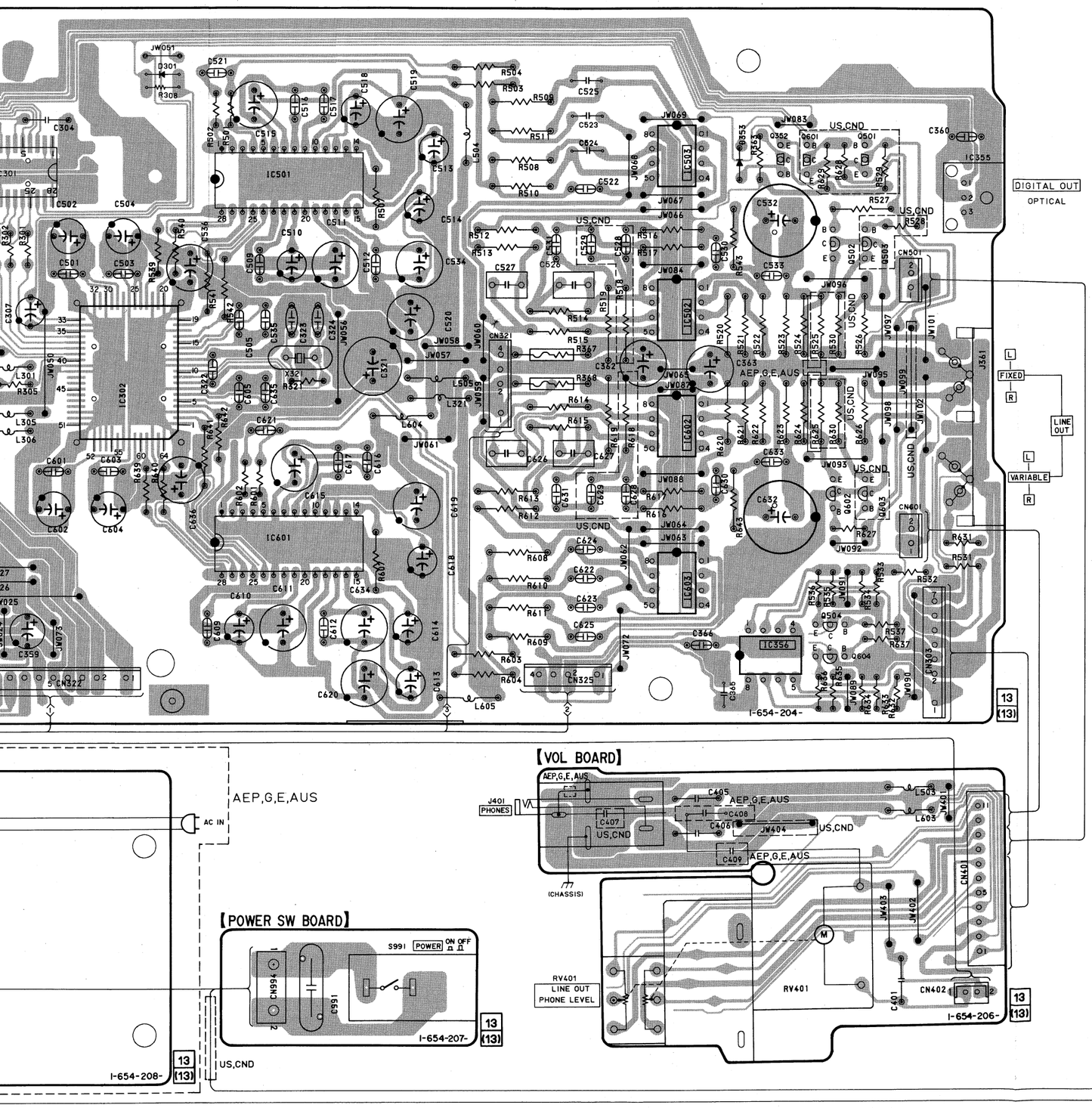
I-654-208-

I-654-207-

I-654-204-

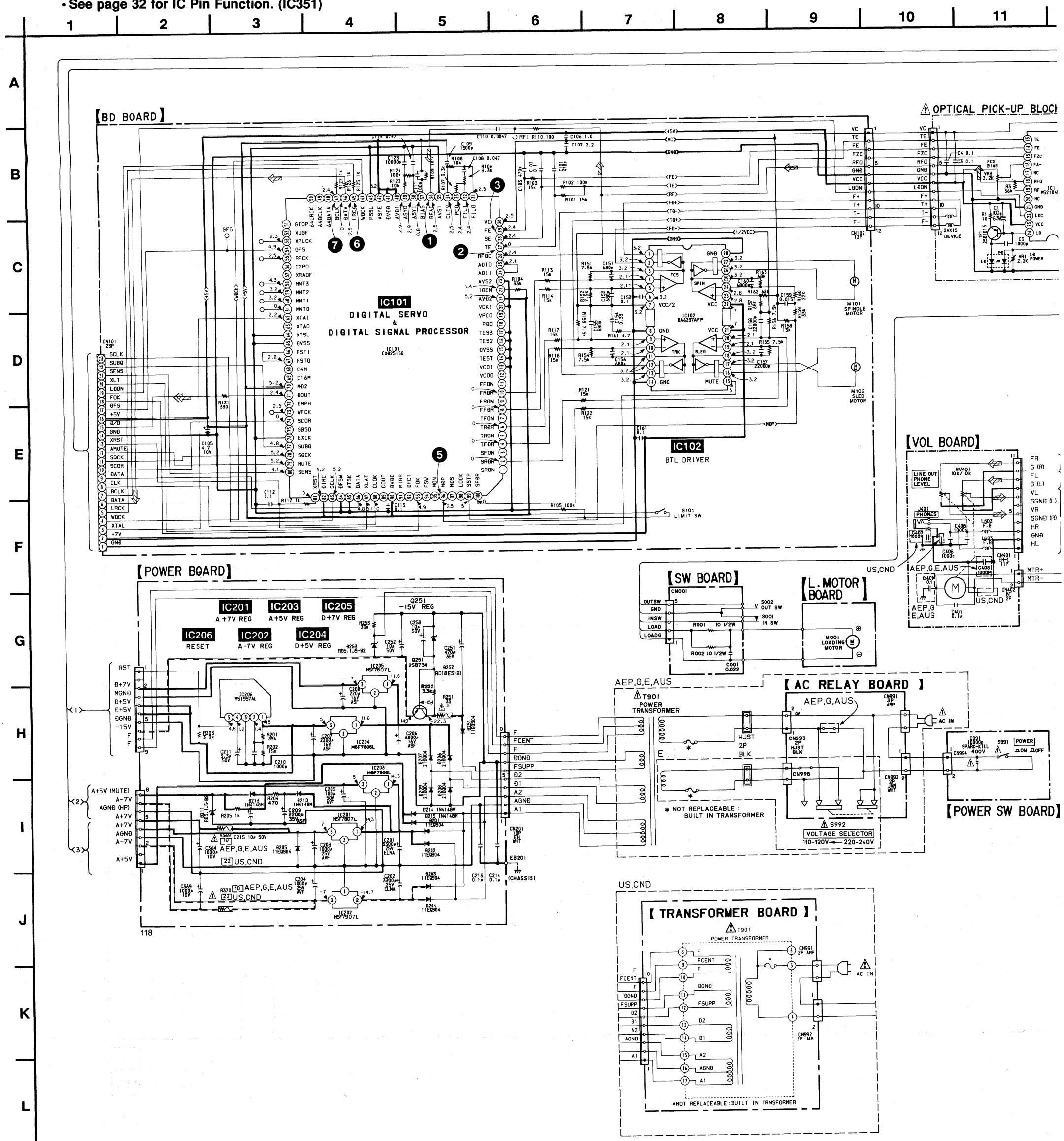
I-654-206-

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32



5-5. SCHEMATIC DIAGRAM — MAIN SECTION —

- See page 13 for IC Block Diagrams.
- See page 32 for IC Pin Function. (IC351)



• **Waveforms**

❶ 1.2Vp-p IC101 (36)	❸ 2.5V APPROX 200mVp-p IC101 (29)	❺ 2.6Vp-p 7.5 μsec IC101 (96)	❼ 5Vp-p 470nsec IC101 (47)
❷ 2.5V APPROX 400mVp-p IC101 (27)	❹ 1.4Vp-p 45MHz IC302 (9)	❻ 5.0Vp-p 22.7 μsec IC101 (45)	❽ 4.6Vp-p 10MHz IC351 (31)

10 11 12 13 14 15 16 17 18 19 20 21

⚠ OPTICAL PICK-UP BLOCK (KSS-240A)

IC1 RF AMP

【MAIN BOARD】

IC353 LOADING MOTOR DRIVE

IC301 DIGITAL FILTER

IC351 SYSTEM CONTROL

IC352 RAM

IC354 VOLUME MOTOR DRIVE

IC302 Ð/A CONVERTER

【VOL BOARD】

【POWER SW BOARD】

A DISPLAY BOARD CN801

• **Waveforms**

❶ 1.2Vp-p IC101 ㊱	❸ 2.5V APPROX 200mVp-p IC101 ㉙	❺ 2.6Vp-p 7.5 μsec IC101 ㊻	❼ 5Vp-p 470nsec IC101 ㊼
❷ 2.5V APPROX 400mVp-p IC101 ㉗	❹ 1.4Vp-p 45MHz IC302 ⑨	❻ 5.0Vp-p 22.7 μsec IC101 ㊺	❽ 4.6Vp-p 10MHz IC351 ㉛

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21

⚠ OPTICAL PICK-UP BLOCK (KSS-240A)

IC1 RF AMP

【MAIN BOARD】

IC353 LOADING MOTOR DRIVE

IC301 DIGITAL FILTER

IC351 SYSTEM CONTROL

IC352 RAM

IC354 VOLUME MOTOR DRIVE

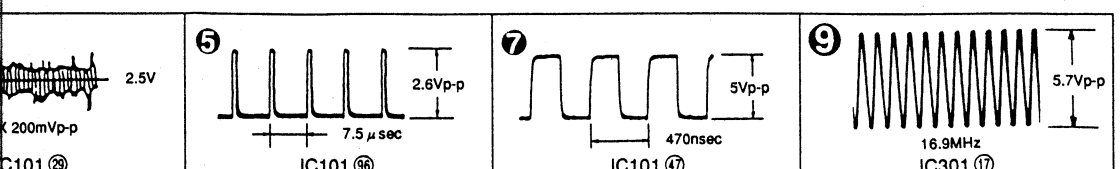
IC302 Ð/A CONVERTER

【VOL BOARD】

【POWER SW BOARD】

— 20 —

— 21 —

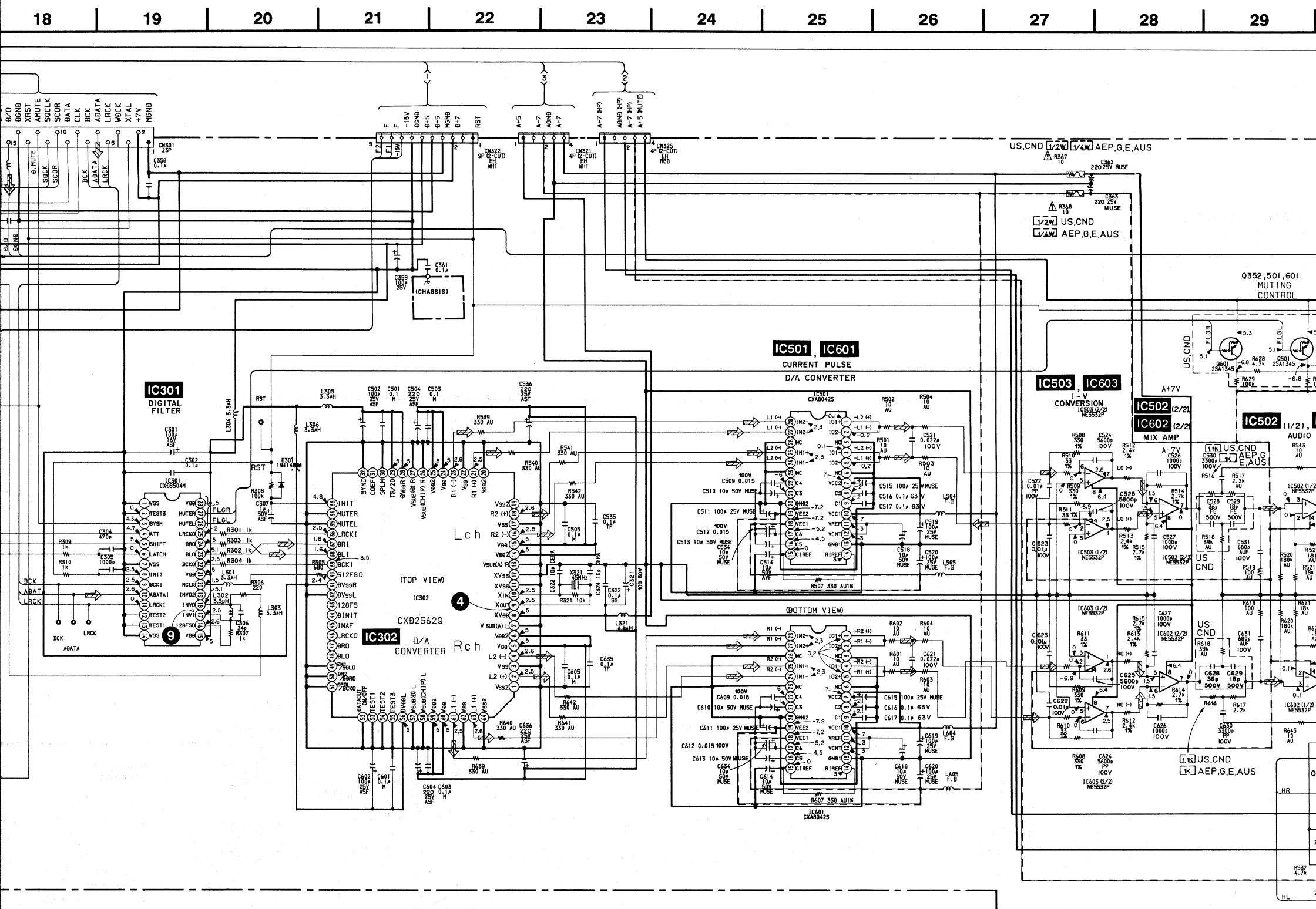


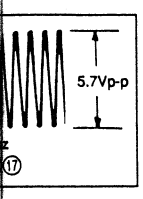
Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⊣W⊢ : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line
- ▬ ▬ : B– Line
- Voltage and waveforms ar
  under no-signal (detuned) c
  no mark : PLAY
  ( ) : LOADING (OUT)
  (( )) : LOADING (IN)
- Voltages are taken with a VO
  Voltage variations may be no
  tolerances.
- Waveforms are taken with a
  Voltage variations may be no
  tolerances.
- Circled numbers refer to wa
- Signal path.
  ⇨ : CD
  ⇨ : digital out
- Abbreviation
  CND : Canadian model.
  G : German model.
  AUS : Australian model.





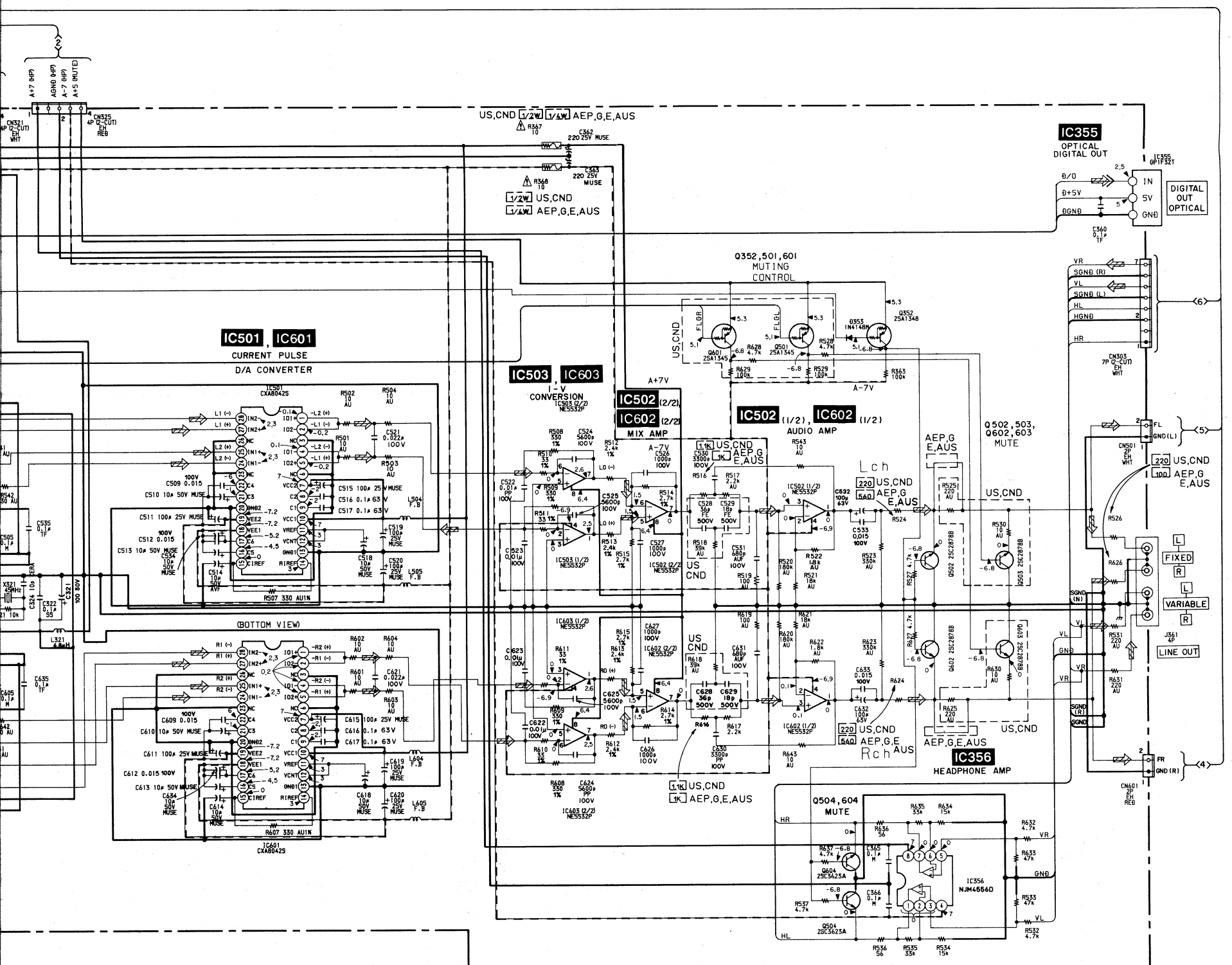
Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⊣W⊢ : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line
- ▬ ▬ : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : PLAY
  ( ) : LOADING (OUT)
  (( )) : LOADING (IN)
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇛ : digital out
- Abbreviation
  CND : Canadian model.
  G : German model.
  AUS : Australian model.

23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33

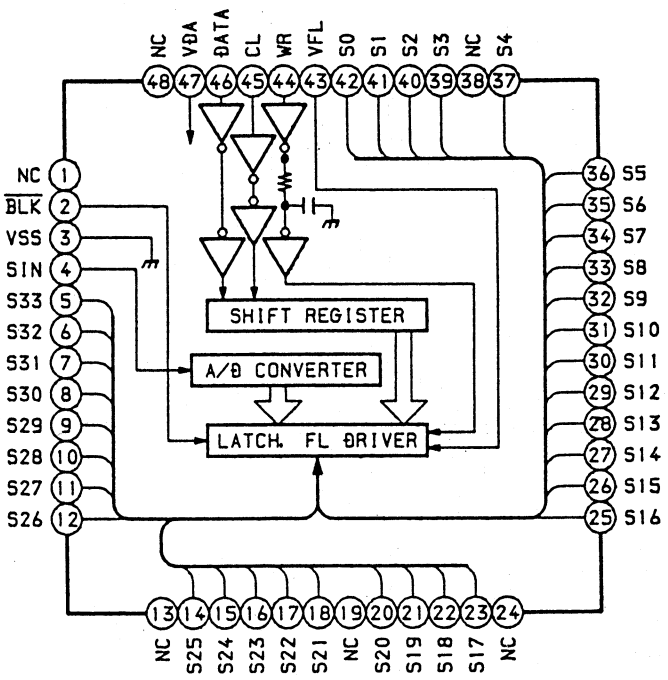


5-6. PRINTED WIRING BOARD — DISPLAY SECTION —

• See page 9 for Circuit Boards Location.

• **IC Block Diagram**

IC801-803 LC7570E



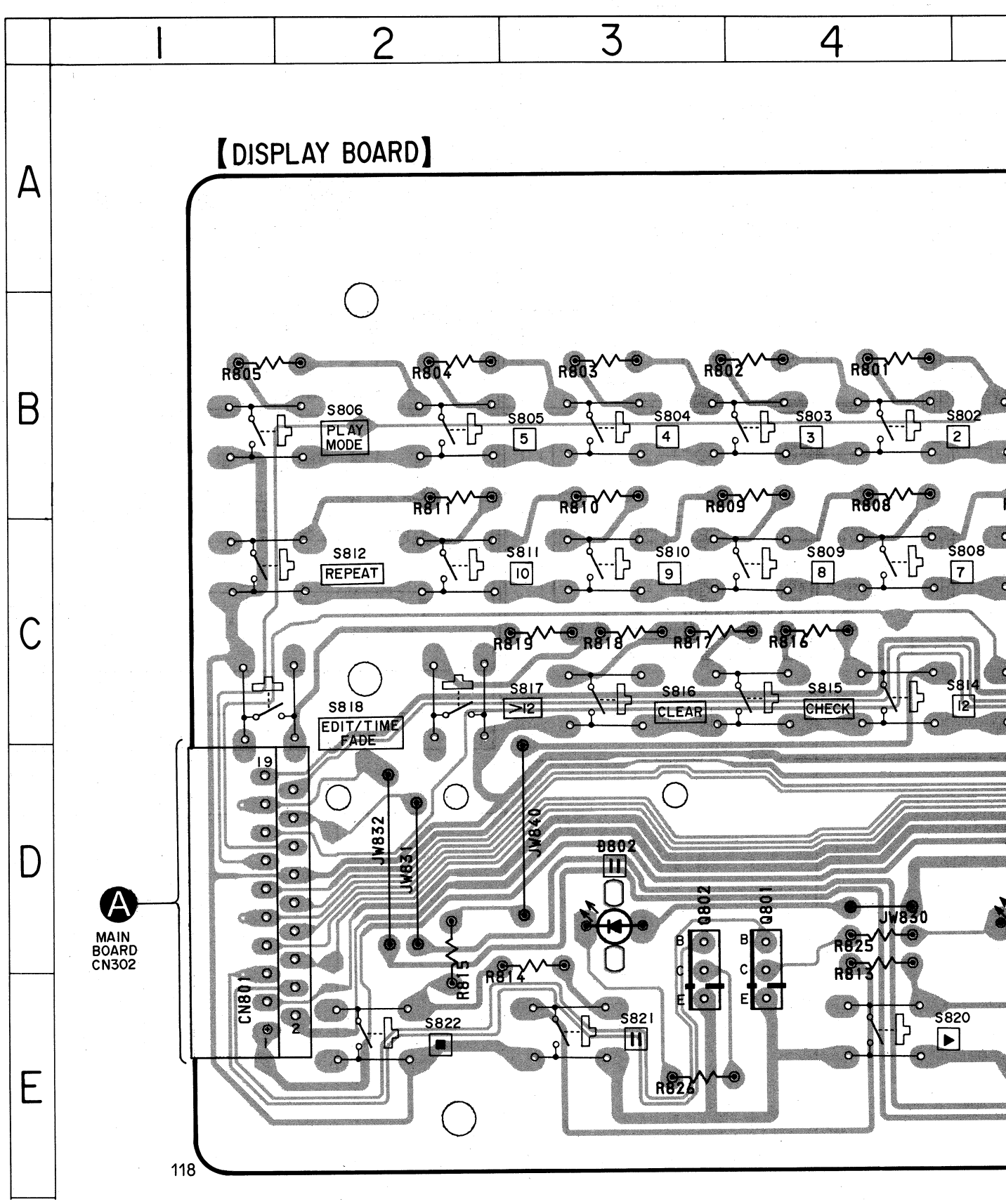
• **Semiconductor Location**

Ref. No.	Location
D801	D-5
D802	D-3
IC801	D-15
IC802	D-11
IC803	D-7
IC804	B-6
Q801	E-4
Q802	E-3
Q803	B-6
Q804	B-6

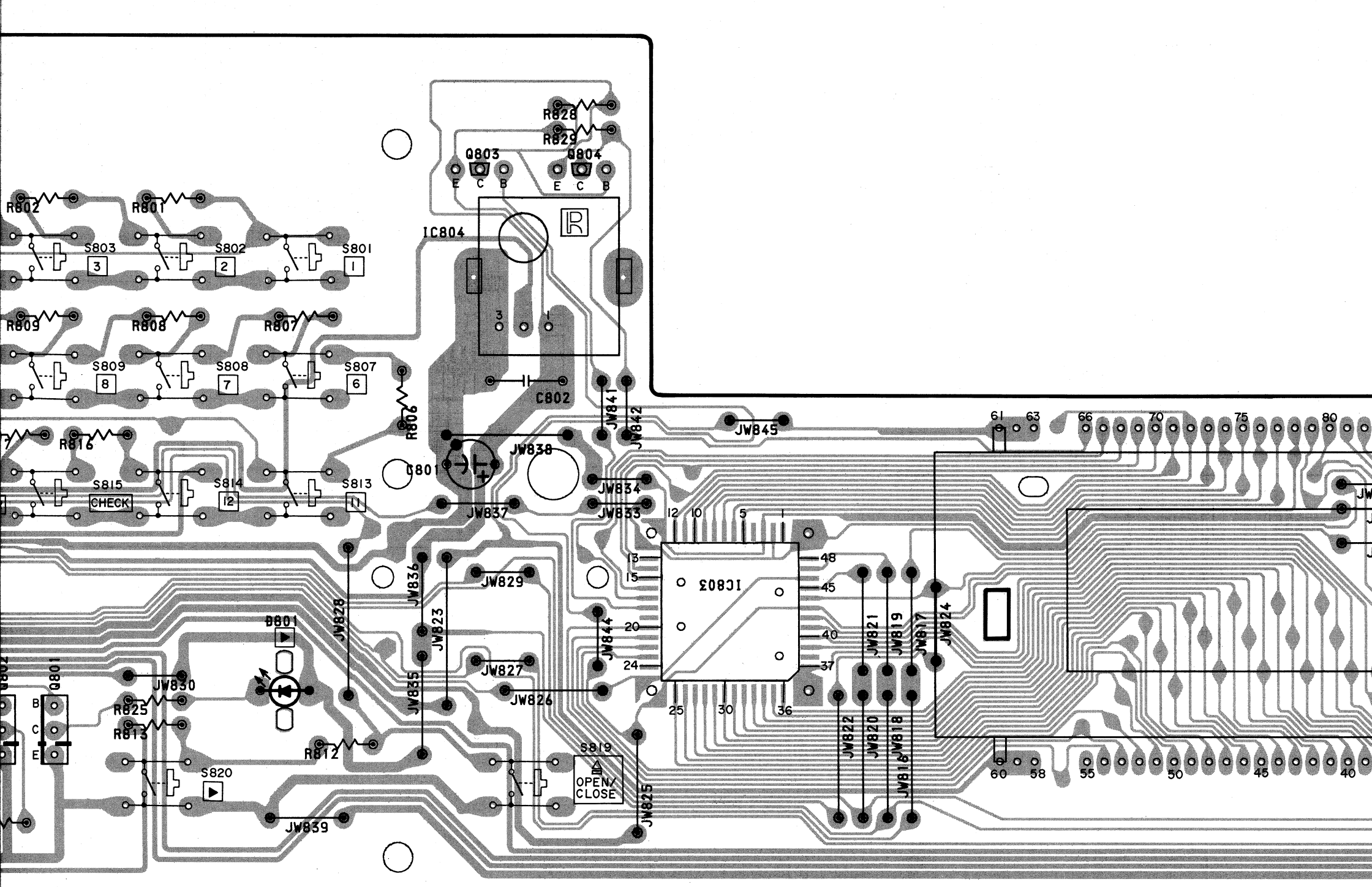
Note:

• ⟜—— : parts extracted from the component side.

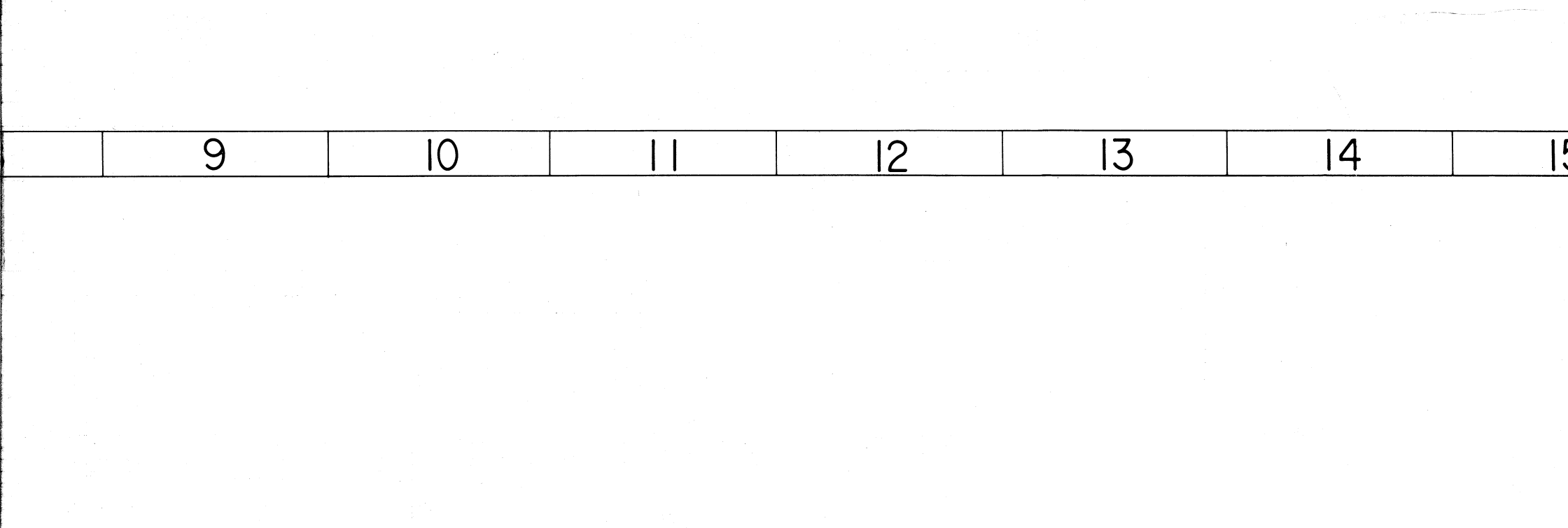
• ▒▒▒ : Pattern on the side which is seen.



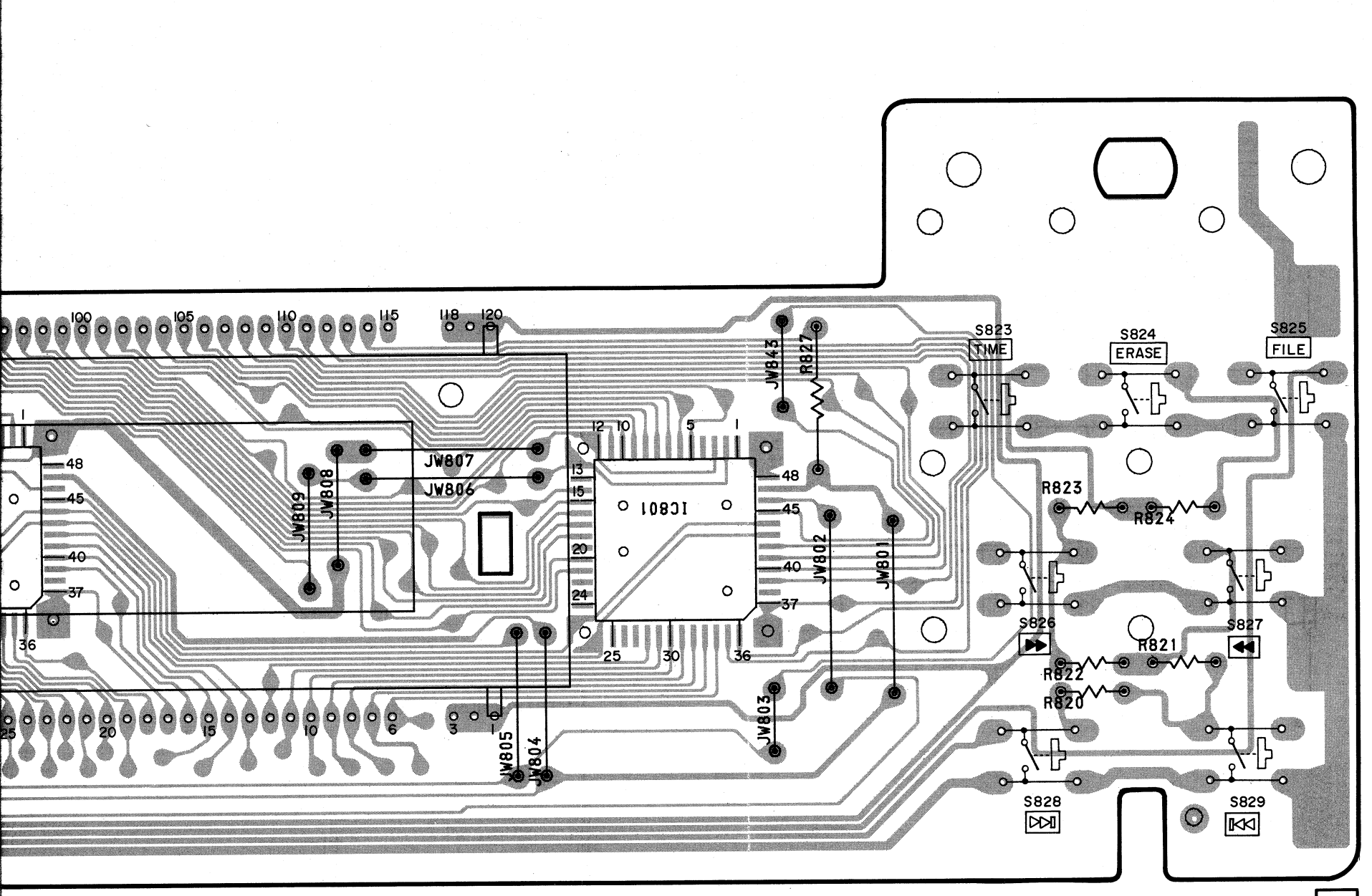
4	5	6	7	8	9	10


R828
R829
Q803
Q804
E C B
E C B
IC804
R802
R801
S803
S802
S801
3
2
1
R809
R808
R807
S809
S808
S807
8
7
6
R806
C802
JW841
JW842
JW845
R816
S815
CHECK
S814
12
S813
11
Q801
JW838
JW834
JW833
JW837
12 10 5 1
13
15
20
24
25 30 36
48
45
40
37
IC803
JW836
JW829
JW828
JW823
JW844
JW821
JW819
JW817
JW824
D801
JW830
R825
R813
R812
JW835
JW827
JW826
S819
OPEN/
CLOSE
S820
JW825
JW822
JW820
JW818
JW816
JW839
61 63 66 70 75 80
60 58 55 50 45 40

	9	10	11	12	13	14	15

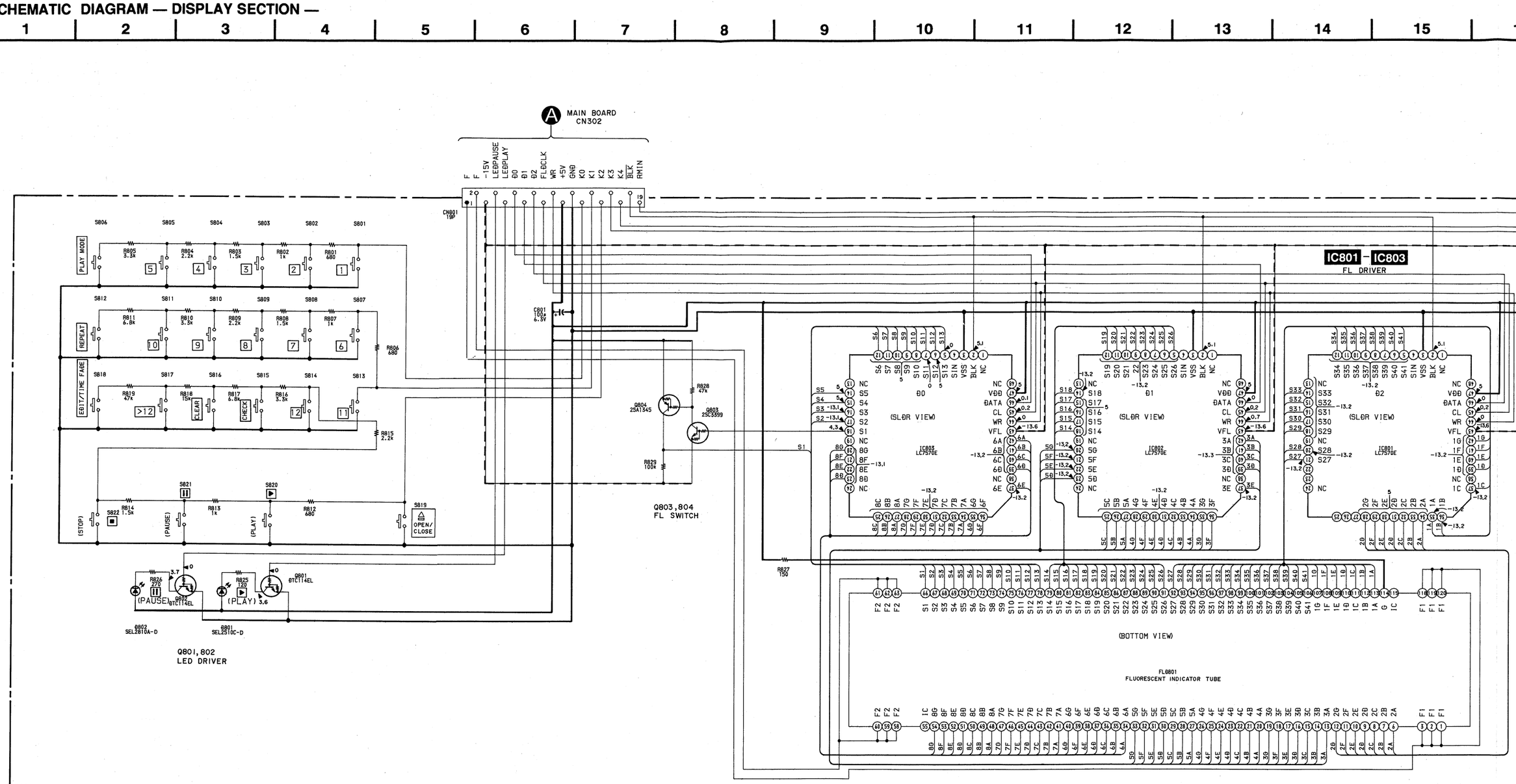


12	13	14	15	16	17



13
1-654-205- (13)

5-7. SCHEMATIC DIAGRAM — DISPLAY SECTION —



7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

BOARD
302

K1 K2 K3 K4 BLK RMIN

IC801 - IC803
FL DRIVER

(SLOR VIEW)

Q803,804
FL SWITCH

IC804
REMOTE CONTROL SENSOR

(BOTTOM VIEW)

FL8801
FLUORESCENT INDICATOR TUBE

【DISPLAY BOARD】

Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ▬▬: B+ Line
- ▬ ▬ ▬: B– Line
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

5-8. IC PIN FUNCTION

• IC351 System Control (CXP84124-025Q)

Pin No.	Pin Name	I/O	Function
1	A3	O	Output of address to S.RAM (LH5160TF)
2	A4	O	
3	A5	O	
4	A6	O	
5	A7	O	
6	A8	O	
7	A9	O	
8	A10	O	
9	A11	O	
10	A12	O	
11	$\overline{WE}$	O	Output of write enable to S.RAM
12	——	–	Not used (open)
13	——	–	
14	LED-PLAY	O	PLAY Lamp output "H": ON
15	LED-PAUSE	O	PAUSE Lamp output "H": ON
16	LED-D/O ON	O	Not used (open)
17	D/O OFF LED	O	
18	DITHER MODE	I	D/F DITHER mode control input
19	VOL UP	O	Headphone motor volume up output
20	VOL DOWN	O	Headphone motor volume down output
21	$\overline{BLK}$	O	Blank output to fluorescent indicator tube driver. (LC7570E). When the indicator tube lights: "H"
22	D0	O	Serial data output to fluorescent indicator tube driver. (LC7570E).
23	D1	O	
24	D2	O	
25	FLD CLK	O	Clock output to fluorescent indicator tube driver. (LC7570E).
26	WR	O	Latch output to fluorescent indicator tube driver. (LC7570E).
27	NC	O	Not used (open)
28	SENSER IN	I	Stabilizer detection input (Connected to GND)
29	LIMIT SW	I	Sled out switch input "L": SW ON (Connected to GND)
30	RESET	I	Microcomputer reset input
31	X IN	I	Oscillator connector pin (10 MHz)
32	X OUT	O	
33	Vss	–	Connected to GND
34	——	–	Not used (open)
35	——	–	
36	GND	–	A/D converter GND
37	+5V	–	A/D converter reference voltage input (Connected to +5V)
38	K0	I	Key data input (A/D input). When the key is not pressed: "H"
39	K1	I	
40	K2	I	
41	K3	I	Key data input (A/D input). When the key is not pressed: "H"
42	K4	I	
43	K5	I	Model distinction input (Not used: "H")
44	ADJ/AFADJ	I	Test mode input. The equipment is fixed at "H"
45	IN/OUT SW	I	Loading IN/OUT switch input
46	SCLK OUT	O	Serial read out data read out clock output to CXD2515Q
47	PRGL	O	Program latch to digital filter
48	CLK	O	Serial data transfer clock output to CXD2515Q, CXD8504M
49	SENSE	I	SENSE signal input from CXD2515Q
50	DATA	O	Serial data output to CXD2515Q, CXD8504M
51	SQCK	O	Sub code Q read out clock output to CXD2515Q
52	SUBQ	I	Sub code Q data input from CXD2515Q
53	TEST 3	O	Not used (open)
54	SEL 1	I	Model distinction input
55	SEL 0	I	
56	RMIN	I	Remote control signal input
57	TIMER	I	Not used (Connected to +5V)
58	TEST 2	O	Not used (open)
59	TEST 1	O	
60	SCOR	I	Sub code sync input from CXD2515Q. Start to read out the sub code receiving this signal
61	A.MUTE	O	Not used (open)
62	LDON	O	Laser diode ON/OFF control output "H": ON
63	XLT	O	Serial data latch output to CXD2515Q
64	LOD OUT	O	Output to rotate loading motor in the loading out direction. "H": OUT
65	LOD IN	O	Output to rotate loading motor in the loading in direction. "H": IN
66	DOUT (NC)	O	Not used (open)
67	D.MUTE	O	Muting control output. "H": MUTE ON
68	D0	I/O	Input and output of data signal with S.RAM (LH5160TF)
69	D1	I/O	
70	D2	I/O	
71	D3	I/O	
72	V_{DD}	I	Power supply terminal (+5V)
73	NC	–	Connected to +5V
74	D4	I/O	Input and output of data signal with S.RAM (LH5160TF)
75	D5	I/O	
76	D6	I/O	
77	D7	I/O	
78	A0	O	Address signal output to S.RAM (LH5160TF)
79	A1	O	
80	A2	O	

NOTE:
• -XX, -X m
have some d
• Items marke
seldom requ
should be an
• Color Indica
KNOB, BAI

6-1. CAS

(US, CND

18
28

Ref. No.	Par
1	4-9
2	3-7
* 3	1-6
* 4	A-4
* 4	A-4
* 5	4-3
⚠6	1-5
⚠6	1-5
⚠6	1-5
⚠6	1-7
* 7	3-7
* 8	4-9
9	3-7
* 10	4-9
* 10	4-9
* 10	4-9
* 10	4-9
* 10	4-9
* 11	A-4
* 11	A-4
12	3-7
13	4-9

ube lights: "H"

Pin No.	Pin Name	I/O	Function
41	K3	I	Key data input (A/D input). When the key is not pressed: "H"
42	K4	I	
43	K5	I	Model distinction input (Not used: "H")
44	ADJ/AFADJ	I	Test mode input. The equipment is fixed at "H"
45	IN/OUT SW	I	Loading IN/OUT switch input
46	SCLK OUT	O	Serial read out data read out clock output to CXD2515Q
47	PRGL	O	Program latch to digital filter
48	CLK	O	Serial data transfer clock output to CXD2515Q, CXD8504M
49	SENSE	I	SENSE signal input from CXD2515Q
50	DATA	O	Serial data output to CXD2515Q, CXD8504M
51	SQCK	O	Sub code Q read out clock output to CXD2515Q
52	SUBQ	I	Sub code Q data input from CXD2515Q
53	TEST 3	O	Not used (open)
54	SEL 1	I	Model distinction input
55	SEL 0	I	
56	RMIN	I	Remote control signal input
57	TIMER	I	Not used (Connected to +5V)
58	TEST 2	O	Not used (open)
59	TEST 1	O	
60	SCOR	I	Sub code sync input from CXD2515Q. Start to read out the sub code receiving this signal
61	A.MUTE	O	Not used (open)
62	LDON	O	Laser diode ON/OFF control output "H": ON
63	XLT	O	Serial data latch output to CXD2515Q
64	LOD OUT	O	Output to rotate loading motor in the loading out direction. "H": OUT
65	LOD IN	O	Output to rotate loading motor in the loading in direction. "H": IN
66	DOUT (NC)	O	Not used (open)
67	D.MUTE	O	Muting control output. "H": MUTE ON
68	D0	I/O	Input and output of data signal with S.RAM (LH5160TF)
69	D1	I/O	
70	D2	I/O	
71	D3	I/O	
72	V_{DD}	I	Power supply terminal (+5V)
73	NC	–	Connected to +5V
74	D4	I/O	Input and output of data signal with S.RAM (LH5160TF)
75	D5	I/O	
76	D6	I/O	
77	D7	I/O	
78	A0	O	Address signal output to S.RAM (LH5160TF)
79	A1	O	
80	A2	O	

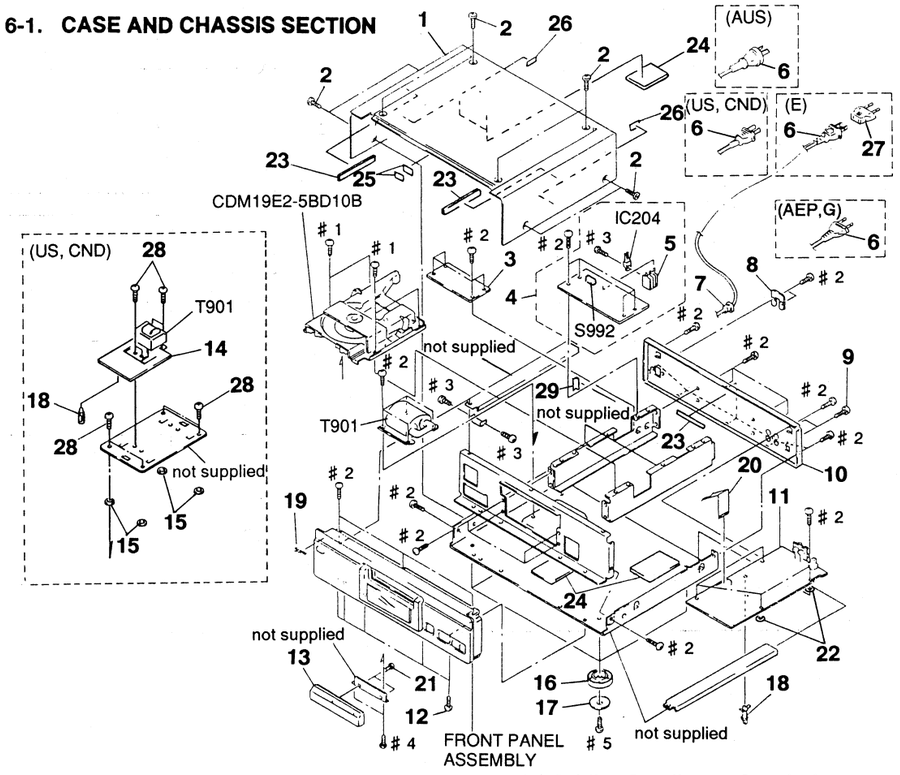
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  G : German model
  AUS : Australian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

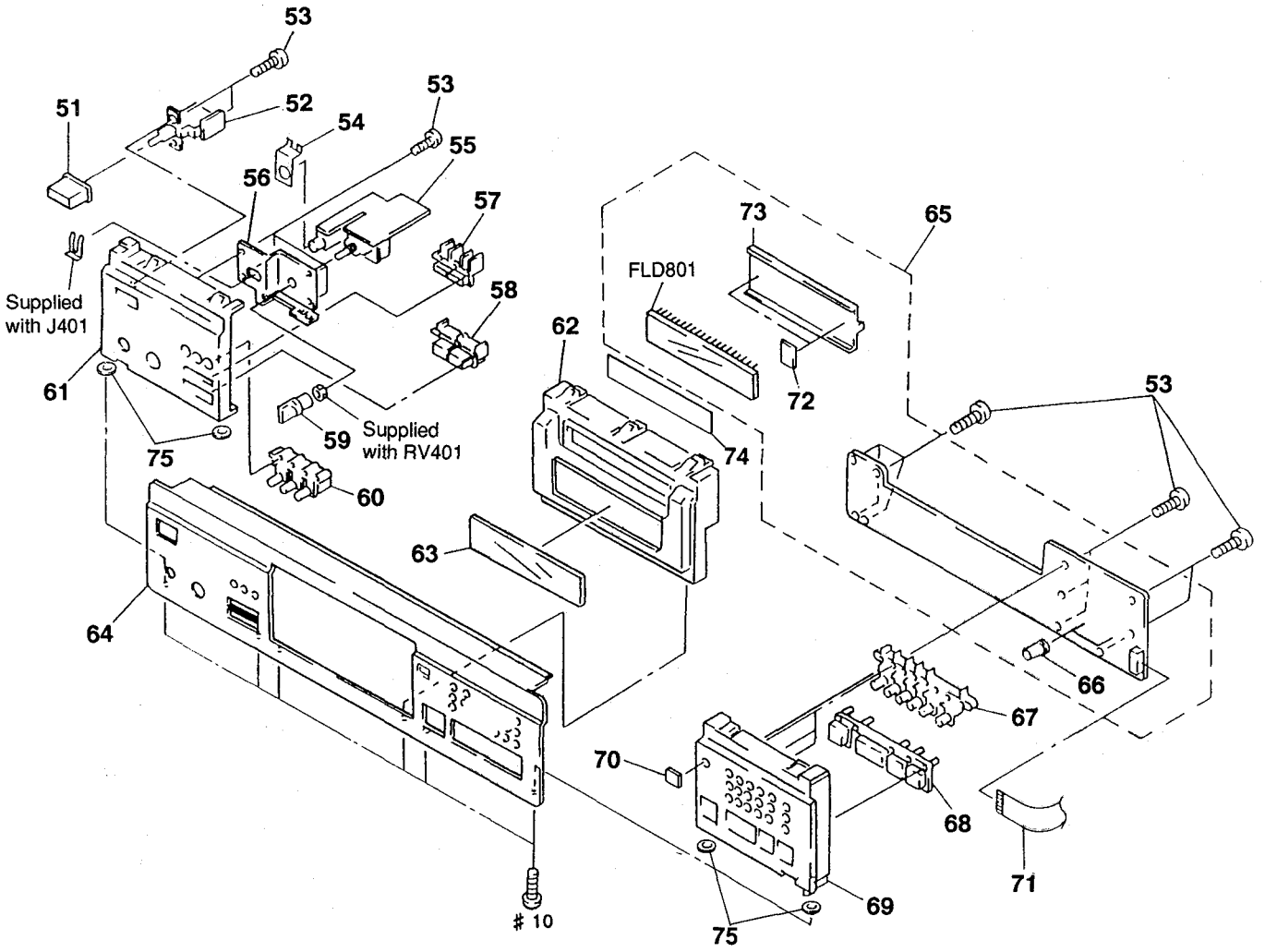
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

6-1. CASE AND CHASSIS SECTION



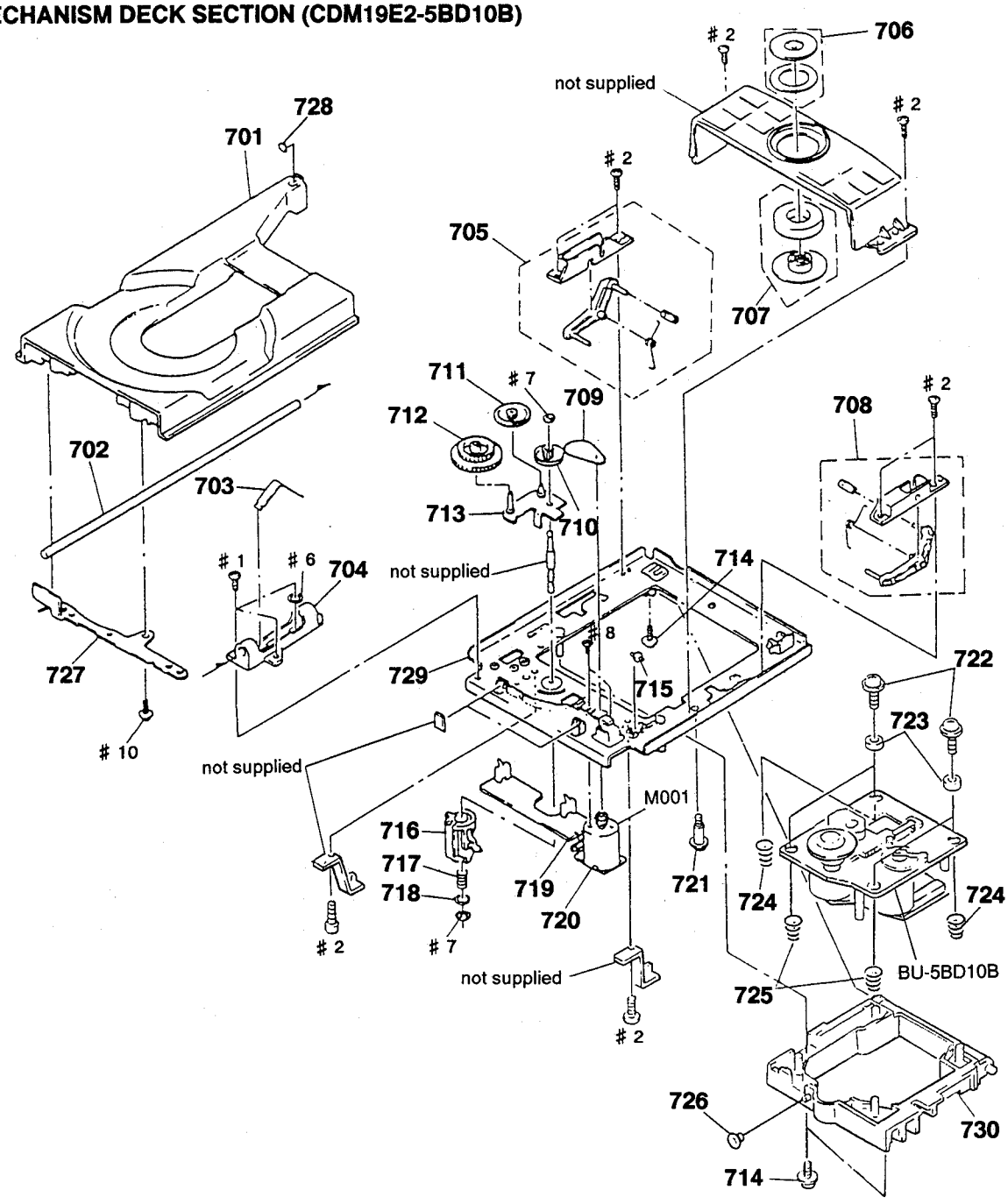
Ref.No.	Part No.	Description	Remark
1	4-969-469-01	CASE	
2	3-704-366-01	SCREW (CASE) (M3X8)	
* 3	1-654-208-11	AC RELAY BOARD (AEP, G, E, AUS)	
* 4	A-4673-256-A	POWER BOARD, COMPLETE (US, CND)	
* 4	A-4673-531-A	POWER BOARD, COMPLETE (AEP, E, G, AUS)	
* 5	4-363-146-00	HEAT SINK, V.OUT	
⚠6	1-558-181-21	CORD, POWER (E)	
⚠6	1-558-568-21	CORD, POWER (AEP, G)	
⚠6	1-559-583-21	CORD, POWER (US, CND)	
⚠6	1-751-060-11	CORD, POWER (AUS)	
* 7	3-703-244-00	BUSHING (2104), CORD	
* 8	4-923-873-01	BRACKET, CORD STOPPER	
9	3-704-515-21	SCREW (BV/RING)	
* 10	4-969-468-11	PANEL, BACK (US)	
* 10	4-969-468-21	PANEL, BACK (AEP)	
* 10	4-969-468-31	PANEL, BACK (E)	
* 10	4-969-468-41	PANEL, BACK (AUS)	
* 10	4-969-468-51	PANEL, BACK (CND)	
* 10	4-969-468-61	PANEL, BACK (G)	
* 11	A-4673-251-A	MAIN BOARD, COMPLETE (US, CND)	
* 11	A-4673-532-A	MAIN BOARD, COMPLETE (AEP, E, G, AUS)	
12	3-703-685-21	SCREW (+BV 3X8)	
13	4-969-477-01	PANEL, LOADING	
* 14	1-654-210-11	TRANSFORMER BOARD (US, CND)	
15	4-949-302-81	WASHER	
16	4-970-123-01	FOOT (F50180S)	
17	4-970-124-01	CUSHION (F50180S)	
* 18	3-670-570-31	SPACER, SUPPORT	
19	4-942-568-01	EMBLEM (NO.5), SONY	
20	1-696-998-11	WIRE (FLAT TYPE) (23 CORE)	
21	4-951-620-01	SCREW (2.6X8), +BVTP	
22	4-949-302-21	WASHER	
23	4-959-077-01	DAMPER	
* 24	4-962-329-01	DAMPER	
* 25	4-615-354-01	SPACER	
26	9-911-844-XX	CUSHION	
⚠27	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
28	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
29	3-846-312-01	SPACER	
IC204	8-759-231-53	IC TA7805S	
⚠S992	1-571-722-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR) (E)	
⚠T901	1-427-810-11	TRANSFORMER, POWER (AEP, G, AUS)	
⚠T901	1-427-811-11	TRANSFORMER, POWER (E)	
⚠T901	1-427-812-11	TRANSFORMER, POWER (US, CND)	

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-923-520-51	KNOB, POWER	
* 52	1-654-207-11	POWER SW BOARD	
53	4-951-620-01	SCREW (2.6X8), +BVTP	
* 54	4-962-201-01	PLATE (HP), GROUND	
* 55	1-654-206-11	VOL BOARD	
* 56	4-969-478-01	BRACKET (HP)	
57	4-970-528-01	BUTTON (F.R)	
58	4-969-562-01	BUTTON (AMS)	
59	4-950-189-01	KNOB (A) (VOL)	
60	4-970-527-01	BUTTON (TIME)	
61	4-969-470-01	PANEL (L)	
62	X-4945-277-1	PANEL (M) ASSY	
63	4-969-476-01	PLATE, INDICATION	
64	4-969-473-01	PANEL, FRONT (US, CND, E, AUS)	
64	4-969-473-11	PANEL, FRONT (AEP, G)	
* 65	A-4673-252-A	DISPLAY BOARD, COMPLETE	
* 66	3-362-478-01	HOLDER (T), LED	
67	4-969-475-01	BUTTON (DIRECT)	
68	X-4945-276-1	BUTTON (PLAY) ASSY	
69	4-969-471-01	PANEL (R)	
70	4-969-185-01	WINDOW (REMOTE CONTROL)	
71	1-765-073-11	WIRE (FLAT TYPE) (19 CORE)	
* 72	4-971-241-01	CUSHION (FLT)	
* 73	4-969-510-01	HOLDER (FL)	
74	4-969-834-01	FILTER	
75	4-949-302-21	WASHER	
FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT	

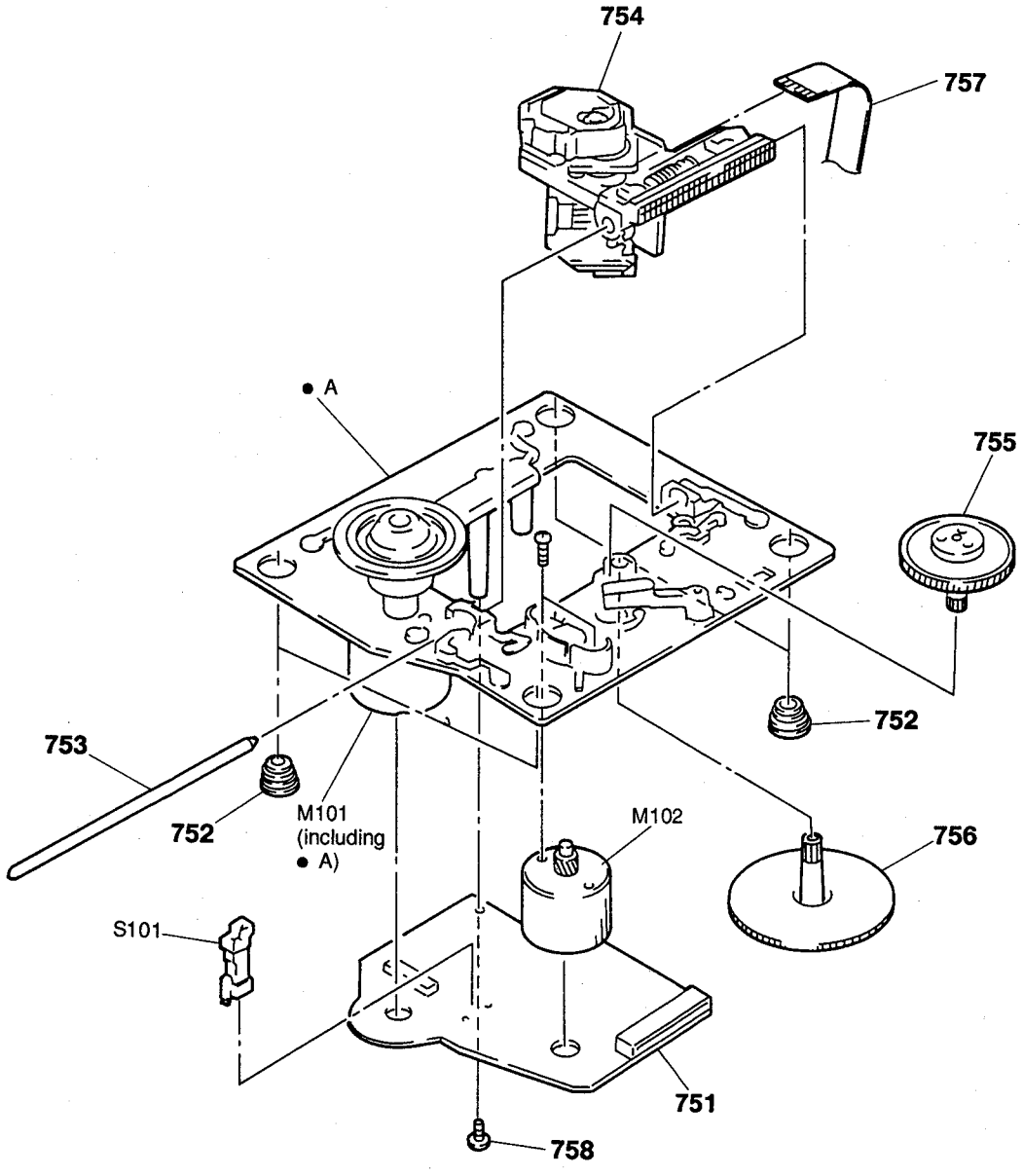
6-3. MECHANISM DECK SECTION (CDM19E2-5BD10B)



Ref. No.	Part No.	Description	Remark
701	4-948-353-01	TABLE, DISC	
* 702	4-948-368-01	BAR (MAIN), GUIDE	
* 703	4-927-648-01	SLIDER (GROUND)	
* 704	4-948-360-01	BEARING, LOADING	
705	A-4604-913-A	LOCK (L) ASSY, STABLE	
706	A-4665-024-A	MAGNET ASSY	
* 707	4-918-679-04	PULLEY, PRESS	
708	A-4604-914-A	LOCK (R) ASSY, STABLE	
709	4-927-649-01	BELT	
710	4-929-724-01	PULLEY (B)	
711	4-927-628-01	GEAR (C)	
712	4-927-620-01	GEAR (P)	
713	X-4927-608-1	ARM ASSY, SWING	
* 714	4-917-583-21	BRACKET, YOKE	
715	4-927-627-01	ROLLER (S, G)	
* 716	4-948-371-01	CAM (BU)	

Ref. No.	Part No.	Description	Remark
717	3-659-338-00	SPRING, COMPRESSION	
718	4-927-654-01	WASHER (LIMITER)	
* 719	1-641-764-11	SW BOARD	
* 720	1-641-765-11	L. MOTOR BOARD	
721	4-951-949-01	SCREW (TRANSPORT LOCK), STEP	
722	4-951-620-01	SCREW (2.6X8), +BVTP	
* 723	4-943-119-01	HOLDER (SP)	
724	4-917-541-01	SPRING (B)	
725	4-917-572-01	SPRING (B)	
726	4-927-631-01	ROLLER (L)	
* 727	4-948-370-01	BRACKET (LOADING PANEL)	
728	9-911-838-XX	RETAINER, CASSETTE	
* 729	4-948-355-05	CHASSIS (OUTSERT)	
* 730	X-4945-479-1	HOLDER (BU5) ASSY	
M001	A-4604-347-A	MOTOR (L) ASSY (LOADING MOTOR)	

6-4. BASE UNIT SECTION (BU-5BD10B)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 751	A-4649-432-A	BD BOARD, COMPLETE	
752	4-951-940-01	INSULATOR (BU)	
753	4-917-565-01	SHAFT, SLED	
⚠754	8-848-144-11	OPTICAL PICK-UP BLOCK KSS-240A	
755	4-917-567-01	GEAR (M)	
756	4-917-564-01	GEAR (P), FLATNESS	
757	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
758	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M102	X-4917-504-1	MOTOR ASSY (SLED MOTOR)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT SW)	

SECTION 7
ELECTRICAL PARTS LIST

AC RELAY **BD**

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  CND : Canadian model
  G : German model
  AUS : Australian model

Ref. No.	Part No.	Description			Remark
*	1-654-208-11	AC RELAY BOARD (AEP, G, E, AUS)			
		**********			
		< CONNECTOR >			
CN991	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			(AEP, G, E, AUS)
CN992	1-564-321-00	PIN, CONNECTOR 2P (AEP, G, E, AUS)			
* CN993	1-564-321-21	PIN, CONNECTOR 2P (AEP, G, E, AUS)			
CN995	1-770-128-11	PIN, CONNECTOR 2P (E)			
		< SWITCH >			
⚠S992	1-571-722-11	SWITCH, VOLTAGE SELECTION			(VOLTAGE SELECTOR) (E)
**********					
*	A-4649-432-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C158	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN101	1-568-865-11	SOCKET, CONNECTOR 23P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-361-94	IC CXD2515AQ			
IC102	8-759-071-79	IC BA6297AFP-T1			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-00	METAL CHIP	1M	5%	1/10W
R110	1-216-025-91	METAL GLAZE	100	5%	1/10W
R112	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-00	METAL CHIP	100K	5%	1/10W
R125	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R126	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R127	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R157	1-216-093-00	METAL CHIP	68K	5%	1/10W

Ref.No.	Part No.	Description				Remark
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
R162	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R163	1-216-093-00	METAL CHIP	68K	5%	1/10W	
		< SWITCH >				
S101	1-572-085-11	SWITCH, LEAF (LIMIT SW)				
**********						
*	A-4673-252-A	DISPLAY BOARD, COMPLETE				
		**********				
*	3-362-478-01	HOLDER (T), LED				
*	4-969-510-01	HOLDER (FL)				
*	4-971-241-01	CUSHION (FLT)				
		< CAPACITOR >				
C801	1-126-177-11	ELECT	100uF	20%	10V	
C802	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
* CN801	1-568-862-11	SOCKET, CONNECTOR 19P				
		< DIODE >				
D801	8-719-303-02	LED	SEL2510C-D (▷)			
D802	8-719-301-52	LED	SEL2810A-C (▯▯)			
		< FLUORESCENT INDICATOR >				
FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC801	8-759-324-36	IC	LC7570E			
IC802	8-759-324-36	IC	LC7570E			
IC803	8-759-324-36	IC	LC7570E			
IC804	8-741-810-59	IC	SBX1610-59			
		< TRANSISTOR >				
Q801	8-729-900-45	TRANSISTOR	DTC114EF			
Q802	8-729-900-45	TRANSISTOR	DTC114EF			
Q803	8-729-900-89	TRANSISTOR	DTC144ES			
Q804	8-729-900-65	TRANSISTOR	DTA144ES			
		< RESISTOR >				
R801	1-249-415-11	CARBON	680	5%	1/4W	
R802	1-249-417-11	CARBON	1K	5%	1/4W	
R803	1-249-419-11	CARBON	1.5K	5%	1/4W	
R804	1-249-421-11	CARBON	2.2K	5%	1/4W	
R805	1-249-423-11	CARBON	3.3K	5%	1/4W	
R806	1-249-415-11	CARBON	680	5%	1/4W	
R807	1-249-417-11	CARBON	1K	5%	1/4W	
R808	1-249-419-11	CARBON	1.5K	5%	1/4W	
R809	1-249-421-11	CARBON	2.2K	5%	1/4W	
R810	1-249-423-11	CARBON	3.3K	5%	1/4W	
R811	1-249-427-11	CARBON	6.8K	5%	1/4W	
R812	1-249-415-11	CARBON	680	5%	1/4W	
R813	1-249-417-11	CARBON	1K	5%	1/4W	
R814	1-249-419-11	CARBON	1.5K	5%	1/4W	
R815	1-249-421-11	CARBON	2.2K	5%	1/4W	
R816	1-249-423-11	CARBON	3.3K	5%	1/4W	
R817	1-249-427-11	CARBON	6.8K	5%	1/4W	
R818	1-249-431-11	CARBON	15K	5%	1/4W	
R819	1-249-437-11	CARBON	47K	5%	1/4W	
R820	1-249-415-11	CARBON	680	5%	1/4W	
R821	1-249-417-11	CARBON	1K	5%	1/4W	
R822	1-249-419-11	CARBON	1.5K	5%	1/4W	
R823	1-249-421-11	CARBON	2.2K	5%	1/4W	
R824	1-249-423-11	CARBON	3.3K	5%	1/4W	
R825	1-249-406-11	CARBON	120	5%	1/4W	
R826	1-249-410-11	CARBON	270	5%	1/4W	
R827	1-247-811-31	CARBON	150	5%	1/4W	
R828	1-249-437-11	CARBON	47K	5%	1/4W	
R829	1-249-441-11	CARBON	100K	5%	1/4W	
		< SWITCH >				
S801	1-554-303-21	SWITCH, TACTILE (1)				
S802	1-554-303-21	SWITCH, TACTILE (2)				
S803	1-554-303-21	SWITCH, TACTILE (3)				
S804	1-554-303-21	SWITCH, TACTILE (4)				
S805	1-554-303-21	SWITCH, TACTILE (5)				
S806	1-554-303-21	SWITCH, TACTILE (PLAY MODE)				
S807	1-554-303-21	SWITCH, TACTILE (6)				
S808	1-554-303-21	SWITCH, TACTILE (7)				
S809	1-554-303-21	SWITCH, TACTILE (8)				
S810	1-554-303-21	SWITCH, TACTILE (9)				
S811	1-554-303-21	SWITCH, TACTILE (10)				
S812	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S813	1-554-303-21	SWITCH, TACTILE (11)				
S814	1-554-303-21	SWITCH, TACTILE (12)				
S815	1-554-303-21	SWITCH, TACTILE (CHECK)				
S816	1-554-303-21	SWITCH, TACTILE (CLEAR)				
S817	1-554-303-21	SWITCH, TACTILE (>12)				
S818	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)				
S819	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)				
S820	1-554-303-21	SWITCH, TACTILE (▷)				
S821	1-554-303-21	SWITCH, TACTILE (▯▯)				
S822	1-554-303-21	SWITCH, TACTILE (□)				
S823	1-554-303-21	SWITCH, TACTILE (TIME)				
S824	1-554-303-21	SWITCH, TACTILE (ERASE)				
S825	1-554-303-21	SWITCH, TACTILE (FILE)				

DISPLAY | L. MOTOR | MAIN

Ref. No.	Part No.	Description			Remark
S826	1-554-303-21	SWITCH, TACTILE (▷▷)			
S827	1-554-303-21	SWITCH, TACTILE (◁◁)			
S828	1-554-303-21	SWITCH, TACTILE (▷▷|)			
S829	1-554-303-21	SWITCH, TACTILE (|◁◁)			
**********					
*	1-641-765-11	L. MOTOR BOARD			
		**********			
**********					
*	A-4673-251-A	MAIN BOARD, COMPLETE (US, CND)			
		**********			
*	A-4673-532-A	MAIN BOARD, COMPLETE (AEP, G, E, AUS)			
		**********			
		< CAPACITOR >			
C301	1-126-023-11	ELECT	100uF	20%	16V
C302	1-164-159-11	CERAMIC	0.1uF		50V
C304	1-162-290-31	CERAMIC	470PF	10%	50V
C305	1-162-294-31	CERAMIC	0.001uF	10%	50V
C306	1-162-208-31	CERAMIC	24PF	5%	50V
C307	1-126-044-11	ELECT	1uF	20%	50V
C321	1-124-572-11	ELECT	100uF	20%	63V
C322	1-162-806-11	CERAMIC	0.1uF	10%	50V
C323	1-102-947-00	CERAMIC	10PF	5%	50V
C324	1-102-947-00	CERAMIC	10PF	5%	50V
C325	1-164-159-11	CERAMIC	0.1uF		50V
C351	1-125-507-11	DOUBLE LAYERS	0.22F		
C352	1-164-159-11	CERAMIC	0.1uF		50V
C353	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-124-994-11	ELECT	100uF	20%	10V
C355	1-161-494-00	CERAMIC	0.022uF		25V
C356	1-162-306-11	CERAMIC	0.01uF	30%	16V
C357	1-164-159-11	CERAMIC	0.1uF		50V
C358	1-164-159-11	CERAMIC	0.1uF		50V
C359	1-126-023-11	ELECT	100uF	20%	25V
C360	1-136-165-00	FILM	0.1uF	5%	50V
C361	1-164-159-11	CERAMIC	0.1uF		50V
C362	1-124-911-11	ELECT	220uF	20%	50V
C363	1-124-911-11	ELECT	220uF	20%	50V
C365	1-130-495-00	MYLAR	0.1uF	5%	50V
C366	1-130-495-00	MYLAR	0.1uF	5%	50V
C370	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-130-495-00	MYLAR	0.1uF	5%	50V
C502	1-126-023-11	ELECT	100uF	20%	25V
C503	1-130-495-00	MYLAR	0.1uF	5%	50V
C504	1-126-024-11	ELECT	220uF	20%	25V
C505	1-130-495-00	MYLAR	0.1uF	5%	50V
C509	1-136-802-11	FILM	0.015uF	5%	100V
C510	1-126-059-11	ELECT	10uF	20%	50V
C511	1-124-122-11	ELECT	100uF	20%	50V
C512	1-136-802-11	FILM	0.015uF	5%	100V
C513	1-126-059-11	ELECT	10uF	20%	50V
C514	1-126-059-11	ELECT	10uF	20%	50V
C515	1-124-122-11	ELECT	100uF	20%	50V
C516	1-136-850-11	FILM	0.1uF	5%	63V
C517	1-136-850-11	FILM	0.1uF	5%	63V
C518	1-126-059-11	ELECT	10uF	20%	50V
C519	1-124-122-11	ELECT	100uF	20%	50V
C520	1-124-122-11	ELECT	100uF	20%	50V
C521	1-130-973-00	FILM	0.022uF	5%	100V
C522	1-130-955-00	FILM	0.01uF	5%	100V
C523	1-130-955-00	FILM	0.01uF	5%	100V
C524	1-130-339-00	FILM	0.0056uF	5%	100V
C525	1-130-339-00	FILM	0.0056uF	5%	100V
C526	1-136-814-11	FILM	0.001uF	5%	100V
C527	1-136-814-11	FILM	0.001uF	5%	100V
C528	1-107-160-00	MICA	36PF	5%	500V (US, CND)
C529	1-107-208-00	MICA	18PF	5%	500V (US, CND)
C530	1-136-817-11	FILM	0.0033uF	2%	100V
C531	1-136-813-11	FILM	680PF	5%	100V
C532	1-124-572-11	ELECT	100uF	20%	63V
C533	1-136-802-11	FILM	0.015uF	5%	100V
C534	1-126-059-11	ELECT	10uF	20%	50V
C535	1-136-165-00	FILM	0.1uF	5%	50V
C536	1-126-024-11	ELECT	220uF	20%	25V
C601	1-130-495-00	MYLAR	0.1uF	5%	50V
C602	1-126-023-11	ELECT	100uF	20%	25V
C603	1-130-495-00	MYLAR	0.1uF	5%	50V
C604	1-126-024-11	ELECT	220uF	20%	25V
C605	1-130-495-00	MYLAR	0.1uF	5%	50V
C609	1-136-802-11	FILM	0.015uF	5%	100V
C610	1-126-059-11	ELECT	10uF	20%	50V
C611	1-124-122-11	ELECT	100uF	20%	50V
C612	1-136-802-11	FILM	0.015uF	5%	100V
C613	1-126-059-11	ELECT	10uF	20%	50V
C614	1-126-059-11	ELECT	10uF	20%	50V
C615	1-124-122-11	ELECT	100uF	20%	50V
C616	1-136-850-11	FILM	0.1uF	5%	63V
C617	1-136-850-11	FILM	0.1uF	5%	63V
C618	1-126-059-11	ELECT	10uF	20%	50V
C619	1-124-122-11	ELECT	100uF	20%	50V
C620	1-124-122-11	ELECT	100uF	20%	50V
C621	1-130-973-00	FILM	0.022uF	5%	100V
C622	1-130-955-00	FILM	0.01uF	5%	100V
C623	1-130-955-00	FILM	0.01uF	5%	100V
C624	1-130-339-00	FILM	0.0056uF	5%	100V
C625	1-130-339-00	FILM	0.0056uF	5%	100V

Ref.No.	Part No.	Description			Remark
C626	1-136-814-11	FILM	0.001uF	5%	100V
C627	1-136-814-11	FILM	0.001uF	5%	100V
C628	1-107-160-00	MICA	36PF	5%	500V (US, CND)
C629	1-107-208-00	MICA	18PF	5%	500V (US, CND)
C630	1-136-817-11	FILM	0.0033uF	2%	100V
C631	1-136-813-11	FILM	680PF	5%	100V
C632	1-124-572-11	ELECT	100uF	20%	63V
C633	1-136-802-11	FILM	0.015uF	5%	100V
C634	1-126-059-11	ELECT	10uF	20%	50V
C635	1-136-165-00	FILM	0.1uF	5%	50V
C636	1-126-024-11	ELECT	220uF	20%	25V
		< CONNECTOR >			
* CN301	1-568-839-11	SOCKET, CONNECTOR 23P			
CN302	1-568-802-11	SOCKET, CONNECTOR 19P			
CN303	1-691-769-11	PLUG (MICRO CONNECTOR) 7P			
CN321	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
CN322	1-691-771-11	PLUG (MICRO CONNECTOR) 9P			
* CN323	1-568-954-11	PIN, CONNECTOR 5P			
* CN324	1-568-951-11	PIN, CONNECTOR 2P			
CN325	1-691-766-31	PLUG (MICRO CONNECTOR) 4P			
CN501	1-564-505-11	PLUG, CONNECTOR 2P			
* CN601	1-564-505-11	PLUG, CONNECTOR 2P			
		< DIODE >			
D301	8-719-987-63	DIODE 1N4148M			
D351	8-719-987-63	DIODE 1N4148M			
D352	8-719-109-87	DIODE RD5.6ES-B			
D353	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC301	8-759-287-69	IC CXD8504M			
IC302	8-759-044-10	IC CXD2562Q			
IC351	8-752-864-35	IC CXP84124-025Q			
IC352	8-759-289-94	IC LH5160TF			
IC353	8-759-822-09	IC LB1641			
IC354	8-759-962-08	IC BA6208			
IC355	8-749-921-12	IC GP1F32T (DIGITAL OUT OPTICAL)			
IC356	8-759-981-85	IC RC4556D			
IC501	8-759-293-17	IC CXA8042S			
IC502	8-759-900-72	IC NE5532P			
IC503	8-759-900-72	IC NE5532P			
IC601	8-759-293-17	IC CXA8042S			
IC602	8-759-900-72	IC NE5532P			
IC603	8-759-900-72	IC NE5532P			
		< JACK >			
J361	1-569-443-21	JACK, PIN 4P (LINE OUT (FIXED, VARIABLE))			

Ref.No.	Part No.	Description			Remark
		< COIL >			
L301	1-410-322-11	INDUCTOR	3.3uH		
L302	1-410-503-11	INDUCTOR	3.3uH		
L303	1-410-322-11	INDUCTOR	3.3uH		
L304	1-410-322-11	INDUCTOR	3.3uH		
L305	1-410-322-11	INDUCTOR	3.3uH		
L306	1-410-322-11	INDUCTOR	3.3uH		
L321	1-410-970-11	INDUCTOR	6.8uH		
L351	1-410-322-11	INDUCTOR	3.3uH		
L504	1-412-473-21	INDUCTOR	0uH		
L505	1-412-473-21	INDUCTOR	0uH		
L604	1-412-473-21	INDUCTOR	0uH		
L605	1-412-473-21	INDUCTOR	0uH		
		< TRANSISTOR >			
Q352	8-729-900-61	TRANSISTOR	DTA114ES		
Q501	8-729-900-65	TRANSISTOR	DTA144ES (US, CND)		
Q502	8-729-231-55	TRANSISTOR	2SC2878-AB		
Q503	8-729-231-55	TRANSISTOR	2SC2878-AB (US, CND)		
Q504	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q601	8-729-900-65	TRANSISTOR	DTA144ES (US, CND)		
Q602	8-729-231-55	TRANSISTOR	2SC2878-AB		
Q603	8-729-231-55	TRANSISTOR	2SC2878-AB (US, CND)		
Q604	8-729-141-30	TRANSISTOR	2SC3623A-LK		
		< RESISTOR >			
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W
R305	1-249-415-11	CARBON	680	5%	1/4W
R306	1-249-409-11	CARBON	220	5%	1/4W
R307	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-249-441-11	CARBON	100K	5%	1/4W
R309	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-417-11	CARBON	1K	5%	1/4W
R321	1-249-429-11	CARBON	10K	5%	1/4W
R351	1-249-427-11	CARBON	6.8K	5%	1/4W
R352	1-249-427-11	CARBON	6.8K	5%	1/4W
R353	1-249-427-11	CARBON	6.8K	5%	1/4W
R354	1-249-427-11	CARBON	6.8K	5%	1/4W
R355	1-249-427-11	CARBON	6.8K	5%	1/4W
R356	1-249-427-11	CARBON	6.8K	5%	1/4W
R357	1-249-427-11	CARBON	6.8K	5%	1/4W
R358	1-249-427-11	CARBON	6.8K	5%	1/4W
R359	1-249-415-11	CARBON	680	5%	1/4W
R360	1-249-415-11	CARBON	680	5%	1/4W
R361	1-249-399-11	CARBON	33	5%	1/4W
R362	1-249-417-11	CARBON	1K	5%	1/4W
R363	1-249-441-11	CARBON	100K	5%	1/4W

MAIN

Ref. No.	Part No.	Description				Remark
R364	1-249-417-11	CARBON	1K	5%	1/4W	
R365	1-249-417-11	CARBON	1K	5%	1/4W	
R366	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R367	1-212-857-00	FUSIBLE	10	5%	1/4W	F (AEP, G, E, AUS)
⚠R367	1-217-997-11	FUSIBLE	10	5%	1/2W	F (US, CND)
⚠R368	1-212-857-00	FUSIBLE	10	5%	1/4W	F (AEP, G, E, AUS)
⚠R368	1-217-997-11	FUSIBLE	10	5%	1/2W	F (US, CND)
R371	1-249-441-11	CARBON	100K	5%	1/4W	
R372	1-249-429-11	CARBON	10K	5%	1/4W	
R501	1-259-380-11	CARBON	10	5%	1/6W	
R502	1-259-380-11	CARBON	10	5%	1/6W	
R503	1-259-380-11	CARBON	10	5%	1/6W	
R504	1-259-380-11	CARBON	10	5%	1/6W	
R507	1-247-706-11	CARBON	330	5%	1/4W	
R508	1-247-706-11	CARBON	330	5%	1/4W	
R509	1-247-706-11	CARBON	330	5%	1/4W	
R510	1-249-887-11	CARBON	33	1%	1/4W	
R511	1-249-887-11	CARBON	33	1%	1/4W	
R512	1-249-932-11	CARBON	2.4K	1%	1/4W	
R513	1-249-932-11	CARBON	2.4K	1%	1/4W	
R514	1-249-933-11	CARBON	2.7K	1%	1/4W	
R515	1-249-933-11	CARBON	2.7K	1%	1/4W	
R516	1-247-713-11	CARBON	1K	5%	1/4W	(AEP, G, E, AUS)
R516	1-249-553-11	CARBON	1.1K	5%	1/4W	(US, CND)
R517	1-247-717-11	CARBON	2.2K	5%	1/4W	
R518	1-249-590-11	CARBON	39K	5%	1/4W	(US, CND)
R519	1-247-700-11	CARBON	100	5%	1/4W	
R520	1-249-606-11	CARBON	180K	5%	1/4W	
R521	1-249-461-11	CARBON	18K	5%	1/4W	
R522	1-247-716-11	CARBON	1.8K	5%	1/4W	
R523	1-247-891-00	CARBON	330K	5%	1/4W	
R524	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R524	1-247-710-11	CARBON	560	5%	1/4W	(AEP, G, E, AUS)
R525	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R526	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R526	1-247-700-11	CARBON	100	5%	1/4W	(AEP, G, E, AUS)
R527	1-249-425-11	CARBON	4.7K	5%	1/4W	
R528	1-249-425-11	CARBON	4.7K	5%	1/4W	(US, CND)
R529	1-249-441-11	CARBON	100K	5%	1/4W	(US, CND)
R530	1-249-504-11	CARBON	10	5%	1/4W	(US, CND)
R531	1-259-412-11	CARBON	220	5%	1/6W	
R532	1-249-425-11	CARBON	4.7K	5%	1/4W	
R533	1-249-437-11	CARBON	47K	5%	1/4W	
R534	1-249-431-11	CARBON	15K	5%	1/4W	
R535	1-249-435-11	CARBON	33K	5%	1/4W	
R536	1-249-402-11	CARBON	56	5%	1/4W	
R537	1-249-425-11	CARBON	4.7K	5%	1/4W	
R539	1-259-416-11	CARBON	330	5%	1/6W	
R540	1-259-416-11	CARBON	330	5%	1/6W	
R541	1-259-416-11	CARBON	330	5%	1/6W	
R542	1-259-416-11	CARBON	330	5%	1/6W	
R543	1-249-504-11	CARBON	10	5%	1/4W	
R601	1-259-380-11	CARBON	10	5%	1/6W	
R602	1-259-380-11	CARBON	10	5%	1/6W	
R603	1-259-380-11	CARBON	10	5%	1/6W	
R604	1-259-380-11	CARBON	10	5%	1/6W	
R607	1-247-706-11	CARBON	330	5%	1/4W	
R608	1-247-706-11	CARBON	330	5%	1/4W	
R609	1-247-706-11	CARBON	330	5%	1/4W	
R610	1-249-887-11	CARBON	33	1%	1/4W	
R611	1-249-887-11	CARBON	33	1%	1/4W	
R612	1-249-932-11	CARBON	2.4K	1%	1/4W	
R613	1-249-932-11	CARBON	2.4K	1%	1/4W	
R614	1-249-933-11	CARBON	2.7K	1%	1/4W	
R615	1-249-933-11	CARBON	2.7K	1%	1/4W	
R616	1-247-713-11	CARBON	1K	5%	1/4W	(AEP, G, E, AUS)
R616	1-249-553-11	CARBON	1.1K	5%	1/4W	(US, CND)
R617	1-247-717-11	CARBON	2.2K	5%	1/4W	
R618	1-249-590-11	CARBON	39K	5%	1/4W	(US, CND)
R619	1-247-700-11	CARBON	100	5%	1/4W	
R620	1-249-606-11	CARBON	180K	5%	1/4W	
R621	1-249-461-11	CARBON	18K	5%	1/4W	
R622	1-247-716-11	CARBON	1.8K	5%	1/4W	
R623	1-247-891-00	CARBON	330K	5%	1/4W	
R624	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R624	1-247-710-11	CARBON	560	5%	1/4W	(AEP, G, E, AUS)
R625	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R626	1-247-700-11	CARBON	100	5%	1/4W	(AEP, G, E, AUS)
R626	1-247-704-11	CARBON	220	5%	1/4W	(US, CND)
R627	1-249-425-11	CARBON	4.7K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	(US, CND)
R629	1-249-441-11	CARBON	100K	5%	1/4W	(US, CND)
R630	1-249-504-11	CARBON	10	5%	1/4W	(US, CND)
R631	1-259-412-11	CARBON	220	5%	1/6W	
R632	1-249-425-11	CARBON	4.7K	5%	1/4W	
R633	1-249-437-11	CARBON	47K	5%	1/4W	
R634	1-249-431-11	CARBON	15K	5%	1/4W	
R635	1-249-435-11	CARBON	33K	5%	1/4W	
R636	1-249-402-11	CARBON	56	5%	1/4W	
R637	1-249-425-11	CARBON	4.7K	5%	1/4W	
R639	1-259-416-11	CARBON	330	5%	1/6W	
R640	1-259-416-11	CARBON	330	5%	1/6W	
R641	1-259-416-11	CARBON	330	5%	1/6W	
R642	1-259-416-11	CARBON	330	5%	1/6W	
R643	1-249-504-11	CARBON	10	5%	1/4W	

< VIBRATOR >

X321	1-579-161-11	VIBRATOR, CRYSTAL (45MHz)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remark
X351	1-577-377-11	VIBRATOR, CERAMIC (10MHz)				
**********						
*	A-4673-256-A	POWER BOARD, COMPLETE (US, CND)				
		**********				
*	A-4673-531-A	POWER BOARD, COMPLETE (AEP, G, E, AUS)				
		**********				
*	4-363-146-00	HEAT SINK, V. OUT				
	7-685-871-01	SCREW +BVTT 3X6 (S)				
		< CAPACITOR >				
C201	1-110-578-11	ELECT	3300uF	20%	25V	
C202	1-110-578-11	ELECT	3300uF	20%	25V	
C203	1-124-557-11	ELECT	1000uF	20%	25V	
C204	1-124-557-11	ELECT	1000uF	20%	25V	
C205	1-126-052-11	ELECT	100uF	20%	50V	
C206	1-126-017-11	ELECT	6800uF	20%	16V	
C207	1-124-556-11	ELECT	2200uF	20%	16V	
C208	1-126-024-11	ELECT	220uF	20%	16V	
C209	1-124-618-11	ELECT	2200uF	20%	35V	
C210	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C211	1-126-162-11	ELECT	3.3uF	20%	50V	
C213	1-164-159-11	CERAMIC	0.1uF		50V	
C214	1-164-159-11	CERAMIC	0.1uF		50V	
C215	1-126-059-11	ELECT	10uF	20%	50V	
C251	1-126-857-11	ELECT	470uF	20%	35V	
C252	1-126-059-11	ELECT	10uF	20%	50V	
C253	1-126-059-11	ELECT	10uF	20%	50V	
C364	1-124-473-11	ELECT	1000uF	20%	10V	
C369	1-124-473-11	ELECT	1000uF	20%	10V	
		< CONNECTOR >				
* CN201	1-564-513-11	PLUG, CONNECTOR 10P				
		< DIODE >				
D201	8-719-210-21	DIODE	11EQS04			
D202	8-719-210-21	DIODE	11EQS04			
D203	8-719-210-21	DIODE	11EQS04			
D204	8-719-210-21	DIODE	11EQS04			
D205	8-719-210-21	DIODE	11EQS04			
D206	8-719-975-85	DIODE	ERB83-004			
D207	8-719-975-85	DIODE	ERB83-004			
D208	8-719-975-85	DIODE	ERB83-004			
D209	8-719-975-85	DIODE	ERB83-004			
D210	8-719-987-63	DIODE	1N4148M			
D211	8-719-114-30	DIODE	RD5.1JS-B2			
D213	8-719-987-63	DIODE	1N4148M			
D214	8-719-987-63	DIODE	1N4148M			
D215	8-719-987-63	DIODE	1N4148M			

Ref. No.	Part No.	Description				Remark
D251	8-719-210-21	DIODE	11EQS04			
D252	8-719-113-38	DIODE	RD18ES-T2B1			
D253	8-719-114-30	DIODE	RD5.1JS-B2			
		< IC >				
IC201	8-759-604-86	IC	M5F7807			
IC202	8-759-604-90	IC	M5F7907			
IC203	8-759-231-53	IC	TA7805S			
IC204	8-759-231-53	IC	TA7805S			
IC205	8-759-604-86	IC	M5F7807			
IC206	8-759-636-16	IC	M51957AL			
		< TRANSISTOR >				
Q251	8-729-140-97	TRANSISTOR	2SB734-34			
		< RESISTOR >				
R201	1-249-436-11	CARBON	39K	5%	1/4W	
R202	1-249-431-11	CARBON	15K	5%	1/4W	
R203	1-249-423-11	CARBON	3.3K	5%	1/4W	
R204	1-249-413-11	CARBON	470	5%	1/4W	
R205	1-249-417-11	CARBON	1K	5%	1/4W	
⚠R251	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R252	1-249-423-11	CARBON	3.3K	5%	1/4W	
R253	1-249-435-11	CARBON	33K	5%	1/4W	
⚠R369	1-212-857-00	FUSIBLE	10	5%	1/4W	F (AEP, G, E, AUS)
⚠R369	1-219-006-11	FUSIBLE	22	5%	1/2W	F (US, CND)
⚠R370	1-212-857-00	FUSIBLE	10	5%	1/4W	F (AEP, G, E, AUS)
⚠R370	1-219-006-11	FUSIBLE	22	5%	1/2W	F (US, CND)
**********						
*	1-654-207-11	POWER SW BOARD				
		**********				
		< CAPACITOR >				
⚠C991	1-161-744-00	CERAMIC	0.01uF		400V	
		< CONNECTOR >				
CN994	1-690-123-51	REED (WITH CONNECTOR) (2 CORE)				
		< SWITCH >				
⚠S991	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)				
**********						

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

SW TRANSFORMER VOL

Ref. No.	Part No.	Description	Remark
*	1-641-764-11	SW BOARD	
		********	
		< CAPACITOR >	
C001	1-161-494-00	CERAMIC 0.022uF	25V
		< RESISTOR >	
R001	1-247-727-11	CARBON 10 5%	1/2W
R002	1-247-727-11	CARBON 10 5%	1/2W
		< SWITCH >	
S001	1-571-300-21	SWITCH, ROTARY (IN SW)	
S002	1-571-300-21	SWITCH, ROTARY (OUT SW)	
**********			
*	1-654-210-11	TRANSFORMER BOARD (US, CND)	
		**********	
		< CONNECTOR >	
CN991	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P (US, CND)	
CN992	1-564-321-00	PIN, CONNECTOR 2P (US, CND)	
**********			
*	1-654-206-11	VOL BOARD	
		*********	
*	4-962-201-01	PLATE (HP), GROUND	
		< CAPACITOR >	
C401	1-164-159-11	CERAMIC 0.1uF	50V
C405	1-162-294-31	CERAMIC 0.001uF 10%	50V
C406	1-162-294-31	CERAMIC 0.001uF 10%	50V
C407	1-162-294-31	CERAMIC 0.001uF 10%	50V (US, CND)
C408	1-162-294-31	CERAMIC 0.001uF 10%	50V (AEP, G, E, AUS)
C409	1-164-159-11	CERAMIC 0.1uF	50V (AEP, G, E, AUS)
		< CONNECTOR >	
* CN401	1-564-526-11	PLUG, CONNECTOR 11P	
CN402	1-506-481-11	PIN, CONNECTOR 2P	
		< JACK >	
J401	1-750-162-61	JACK (LARGE TYPE) (PHONES)	
		< COIL >	
L503	1-412-473-21	INDUCTOR 0uH	
L603	1-412-473-21	INDUCTOR 0uH	

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV401	1-223-747-11	RES, VAR, CARBON 10K/10K (LINE OUT PHONE LEVEL)	
**********			
		MISCELLANEOUS	
		**********	
⚠6	1-558-181-21	CORD, POWER (E)	
⚠6	1-558-568-21	CORD, POWER (AEP, G)	
⚠6	1-559-583-21	CORD, POWER (US, CND)	
⚠6	1-751-060-11	CORD, POWER (AUS)	
20	1-696-998-11	WIRE (FLAT TYPE) (23 CORE)	
⚠27	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
71	1-765-073-11	WIRE (FLAT TYPE) (19 CORE)	
⚠754	8-848-144-11	OPTICAL PICK-UP BLOCK KSS-240A	
757	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT	
IC204	8-759-231-53	IC TA7805S	
M001	A-4604-347-A	MOTOR (L) ASSY (LOADING MOTOR)	
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M102	X-4917-504-1	MOTOR ASSY (SLED MOTOR)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT SW)	
⚠S992	1-571-722-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR) (E)	
⚠T901	1-427-810-11	TRANSFORMER, POWER (AEP, G, AUS)	
⚠T901	1-427-811-11	TRANSFORMER, POWER (E)	
⚠T901	1-427-812-11	TRANSFORMER, POWER (US, CND)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-889-11	REMOTE COMMANDER (RM-D921)	
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)	
	3-707-584-21	COVER, BATTERY (for RM-D921)	
	3-759-341-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, SWEDISH) (EXCEPT G)	
	3-759-341-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP, G)	
	3-759-341-91	MANUAL, INSTRUCTION (FINISH, DANNISH) (AEP)	
*	4-955-666-11	CUSHION	
*	4-972-152-01	INDIVIDUAL CARTON (EXCEPT AUS)	
*	4-974-012-01	INDIVIDUAL CARTON (AUS)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		********** HARDWARE LIST **********	
#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
#2	7-682-547-09	SCREW +BVTT 3X6 (S)	
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-685-647-79	SCREW +P 3X10 TYPE2 SLIT	
#5	7-682-565-09	SCREW +BVTT 4X16 (S)	
#6	7-688-003-12	W 3, MIDDLE	
#7	7-624-105-04	STOP RING 2.3, TYPE -E	
#8	7-682-544-04	SCREW +P 3X3	
#9	7-621-255-15	SCREW +P 2X3	
#10	7-685-646-79	SCREW, TAPPING	

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Home A&V Products Div.

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Quality Engineering Dept.

CDP-XA3ES

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
Australian Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject : 1. CORRECTION
2. COLOR VARIATION (GOLD TYPE) ADDITION
3. PARTS CHANGED

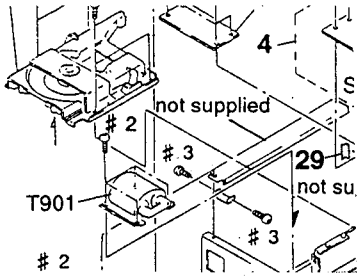
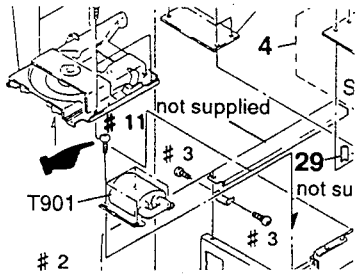
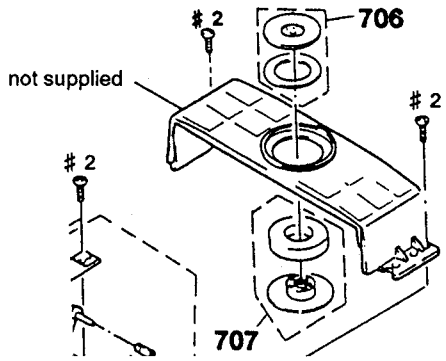
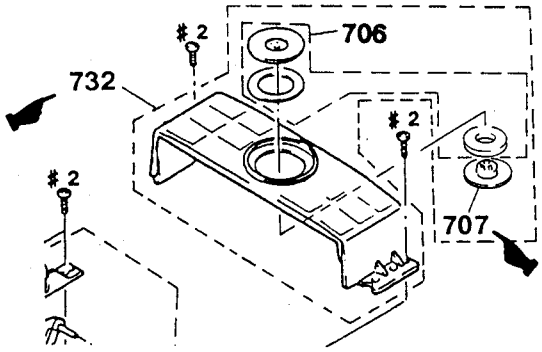
(ECN-CD501431)

#3.98

1. CORRECTION

- Correct your service manual as shown below.

☛ : Indicates corrected portion.

Page	INCORRECT	CORRECT
	Ref.No Part No Description Remark	Ref.No Part No Description Remark
34		
36	—— not supplied —— 	732 A-4604-911-A HOLDER (A.P.) ASSY 
45	** HARDWARE LIST **	** HARDWARE LIST ** #11 7-685-870-09 SCREW +BVTT 3X5 (S)

2. COLOR VARIATION (GOLD TYPE) ADDITION

The others are common parts so that please refer to the previous issued service manual.

Page	BLACK TYPE				GOLD TYPE			
	Ref.No	Part No	Description	Remark	Ref.No	Part No	Description	Remark
34	1	4-969-469-01	CASE		1	4-969-469-31	CASE	
	2	3-704-366-01	SCREW (CASE) (M3X8)		2	3-704-366-71	SCREW (CASE)	
	13	4-969-477-01	PANEL, LOADING		13	4-969-477-11	PANEL, LOADING	
	19	4-942-568-01	EMBLEM (NO.5), SONY		19	4-942-568-11	EMBLEM (NO.5), SONY	
35	51	4-923-520-51	KNOB, POWER		51	4-923-520-41	KNOB, POWER	
	57	4-970-528-01	BUTTON (F.R)		57	4-970-528-11	BUTTON (F.R)	
	58	4-969-562-01	BUTTON (AMS)		58	4-969-562-11	BUTTON (AMS)	
	59	4-950-189-01	KNOB (A) (VOL)		59	4-950-189-11	KNOB (A) (VOL)	
	60	4-970-527-01	BUTTON (TIME)		60	4-970-527-11	BUTTON (TIME)	
	61	4-969-470-01	PANEL (L)		61	4-969-470-11	PANEL (L)	
	62	X-4945-277-1	PANEL (M) ASSY		62	X-4946-794-1	PANEL (M) ASSY	
	64	4-969-473-11	PANEL, FRONT (AEP, G)		64	4-969-473-41	PANEL, FRONT	
	67	4-969-475-01	BUTTON (DIRECT)		67	4-969-475-11	BUTTON (DIRECT)	
	68	X-4945-276-1	BUTTON (PLAY) ASSY		68	X-4945-311-1	BUTTON (PLAY) ASSY	
	69	4-969-471-01	PANEL (R)		69	4-969-471-31	PANEL (R)	
36	701	4-948-353-01	TABLE, DISC		701	4-948-353-11	TABLE, DISC	

• CD MECHANISM TYPE

BLACK TYPE		GOLD TYPE	
CD Mechanism Type	CDM19E2-5BD10B	CD Mechanism Type	CDM19E3-5BD10B

3. PARTS CHANGED

ELECTRICAL PARTS LIST

- Abbreviation
  G : German model
  AUS : Australian model

Page	FORMER						NEW					
	Ref.No	Part No	Description			Remark	Ref.No	Part No	Description			Remark
39			** DISPLAY BOARD **						** DISPLAY BOARD **			
	R827	1-247-811-31	CARBON	150	5%	1/4W	R827	1-249-407-11	CARBON	150	5%	1/4W
40			** MAIN BOARD **						** MAIN BOARD **			
	C301	1-126-023-11	ELECT	100uF	20%	16V	C301	1-126-009-81	ELECT	100uF	20%	16V
	C321	1-124-572-11	ELECT	100uF	20%	63V	C321	1-126-063-11	ELECT	100uF	20%	50V
	C323	1-102-947-00	CERAMIC	10PF	5%	50V	C323	1-102-508-91	CERAMIC	10PF	0.5PF	50V
	C324	1-102-947-00	CERAMIC	10PF	5%	50V	C324	1-102-508-91	CERAMIC	10PF	0.5PF	50V
	C532	1-124-572-11	ELECT	100uF	20%	63V	C532	1-126-063-11	ELECT	100uF	20%	50V
41	C632	1-124-572-11	ELECT	100uF	20%	63V	C632	1-126-063-11	ELECT	100uF	20%	50V
	IC301	8-759-287-69	IC CXD8504M				IC301	8-759-334-74	IC CXD8504AM			
42	R507	1-247-706-11	CARBON	330	5%	1/4W	R507	1-249-911-11	CARBON	330	1%	1/4W
	R508	1-247-706-11	CARBON	330	5%	1/4W	R508	1-249-911-11	CARBON	330	1%	1/4W
	R509	1-247-706-11	CARBON	330	5%	1/4W	R509	1-249-911-11	CARBON	330	1%	1/4W
	R517	1-247-717-11	CARBON	2.2K	5%	1/4W	R517	1-249-560-91	CARBON	2.2K	5%	1/4W
	R519	1-247-700-11	CARBON	100	5%	1/4W	R519	1-249-528-91	CARBON	100	5%	1/4W
	R526	1-247-700-11	CARBON	100	5%	1/4W (AEP, G, E, AUS)	R526	1-249-528-91	CARBON	100	5%	1/4W (AEP, G, E, AUS)
	R607	1-247-706-11	CARBON	330	5%	1/4W	R607	1-249-911-11	CARBON	330	1%	1/4W
	R608	1-247-706-11	CARBON	330	5%	1/4W	R608	1-249-911-11	CARBON	330	1%	1/4W
	R609	1-247-706-11	CARBON	330	5%	1/4W	R609	1-249-911-11	CARBON	330	1%	1/4W
	R617	1-247-717-11	CARBON	2.2K	5%	1/4W	R617	1-249-560-91	CARBON	2.2K	5%	1/4W
	R619	1-247-700-11	CARBON	100	5%	1/4W	R619	1-249-528-91	CARBON	100	5%	1/4W
	R626	1-247-700-11	CARBON	100	5%	1/4W (AEP, G, E, AUS)	R626	1-249-528-91	CARBON	100	5%	1/4W (AEP, G, E, AUS)
44			** VOL BOARD **						** VOL BOARD **			
	J401	1-750-162-61	JACK (LARGE TYPE) (PHONES)				J401	1-766-850-11	JACK (LARGE TYPE) (PHONES)			

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